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THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The Official Organ of

THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

VOLUME 37

LONDON:

Printed by Order of the International Trust for Zoological Nomenclature
and
Sold on behalf of the International Commission on Zoological Nomenclature by the International Trust at its Publication Office, c/o British Museum (Natural History), Cromwell Road, London SW7 5BD
1980

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1980

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

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NOTICES

(a) *Date of commencement of voting.* In normal circumstances the Commission may start to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after the publication of each application. Any zoologist who wishes to comment on any of the applications in the present part is invited to send his contribution, in duplicate, to the Secretariat of the Commission as quickly as possible, and in any case in time to reach the Secretariat before the close of the six-month period.

(b) *Possible use of the plenary powers.* The possible use by the Commission of its plenary powers is involved in the following applications published in the present part of the *Bulletin* (those marked with an asterisk involve the application of Articles 23a-b and 79b):

*(1) *Mesoplodon* Gervais, 1850 (Mammalia: Cetacea): proposed conservation. Z.N.(S.) 2081. (D.W. Rice & K.E. Kinman).

(2) *Prodorylaimus* Andrássy, 1959 (Nematoda): proposed designation of a type species. Z.N.(S.) 2129. (P.A.A. Loof).

(3) *Peggichisme* Kirkaldy, 1904 (Hemiptera Heteroptera): proposed designation of a type species. Z.N.(S.) 2197. (M.H. Sweet).

(4) LYMANTRIIDAE Hampson, [1893] (Insecta Lepidoptera); proposed precedence over ORGYIIDAE Wallengren, 1861 and DASYCHIRIDAE Packard, 1864. Z.N.(S.) 2216. (D.S. Fletcher, I.W.B. Nye & D.C. Ferguson).

(5) *Harminius* Fairmaire, 1852 (Insecta, Coleoptera); proposed designation of a type species. Z.N.(S.) 2264. (E.C. Becker).

*(6) *Acmaea limatula* Carpenter, 1864 (Mollusca, Gastro-

poda): proposed conservation. Z.N.(S.) 2268. (D.R. Lindberg).

(7) Rafinesque, 1822 "On the turtles of the United States" (Reptilia, Testudines); proposed suppression. Z.N.(S.) 2289. (H.M. & R.B. Smith & D. Chiszar).

*(8) *Chrysolina* Motschulsky, 1860 (Insecta, Coleoptera): proposed conservation. Z.N.(S.) 2291. (H. Silfverberg).

*(9) *Chuangia* Walcott, 1911 (Trilobita); proposed conservation. Z.N.(S.) 635. (C. Lochman Balk, the late M.J. Weller & C.J. Stubblefield).

(c) *Receipt of new applications.* The following new applications have been received since the publication of vol. 36(4) on 18 February 1980. Those marked with an asterisk involve the application of Articles 23a-b and 79b.

(1) Dissertations, status of, as publications. Z.N.(S.) 2328. (D. Haman & R.W. Huddleston).

(2) *Chromis* Desmarest, 1814 (Pisces); determination of gender. Z.N.(S.) 2329. (R. Bailey, C.R. Robins & P.H. Greenwood).

(3) ELMIDIDAE Curtis, 1830, proposal to recognise as family-group name based on *Elmis* Latreille, 1802 (Insecta, Coleoptera). Z.N.(S.) 2330. (R.B. Madge & R.D. Pope).

(4) HARPIDAE in Gastropoda and Trilobita; proposals to remove the homonymy. Z.N.(S.) 2331. (J.G.W. Raven).

*(5) *Spisula sachalinensis* Schrenck, 1862 (Mollusca, Bivalvia); proposed conservation. Z.N.(S.) 2332. (A.I. Kafanov).

(6) CAECILIIDAE in Amphibia and Psocoptera; UROPLATINI in Reptilia and Coleoptera; proposals to remove the homonymies. Z.N.(S.) 2333. (H.M. Smith, U. Lanham & A. Loveridge).

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R.V. MELVILLE
Secretary, International Commission on Zoological Nomenclature
January 1980

OBITUARY

Dr W.E. CHINA

Dr W.E. China, who died in September 1979, succeeded the present writer as Assistant Secretary to the Commission on 2 November 1959. He was elected a member of the Commission, and its Acting Secretary, on 21 May 1962. He later reverted to Assistant Secretary and served continuously in that capacity until his retirement in 1971.

When he first joined the Commission's office, China was also Keeper of Entomology at the British Museum (Natural History). Nevertheless, from the first he showed that steady deployment of energy that characterised his term of service. He immediately put into operation the new publications policy of the International Trust for Zoological Nomenclature (the applications with their comments had previously appeared alone in the *Bulletin*; a separate serial had been maintained for the Opinions and Declarations). In the combined *Bulletin* he produced a larger number of applications and Opinions than ever before in the Commission's history. With the help of Margaret Doyle he markedly reduced the time interval between the publication of an application and its submission to a vote. In 1963 he decided to close all cases that had been awaiting attention for more than four years, but their authors were invited to update and resubmit them if they wished. By these means and by the steadiness of his work he increased the output of the Secretariat to the point where, in one or two years, it exceeded the rate of receipt of new applications.

A valedictory notice, with a portrait, was published on his retirement (*Bull. zool. Nom.* vol. 28, p. 66, pl. 2).

R.V.M

TOXOSTOMA CRISSALE BAIRD, 1858 (AVES): SUPPORT FOR PROPOSED CONSERVATION. Z.N.(S.) 2215

(see *Bull. zool. Nom.* vol. 35, pp. 239–242)

By E. Eisenmann (*Chairman, Standing Committee on Ornithological Nomenclature of the International Ornithological Congress and Chairman, American Ornithologists' Union Committee on Classification and Nomenclature)*

Dr J.P. Hubbard has applied for the conservation of the specific name *crissale* in the binomen *Toxostoma crissale* and the suppression of the name *dorsale* in combination with *Toxostoma* for the North American bird species universally known as the Crissal Thrasher. As the application points out, the name *dorsalis* [*sic*] was an unintended substitution by the editor or printer for *crissalis* [*sic*]; in the same paper another species was named *Junco dorsalis* (because of its contrasting back colour); in the manuscript the *Toxostoma* was named *crissalis* because of its contrastingly coloured crissum. When the error was detected, the next issue of the publication published a correction page to be substituted, and for many years the name *Toxostoma crissalis* (emended to *crissale* because of the gender of the generic name) was universally used. Then it was subsequently noted that, regardless of the author's original intention, and the earliest possible correction of the editor's or printer's error, the inappropriate and confusing name *dorsalis* or *dorsale* (corrected for gender) had priority. Under the Code, action by the International Commission seems required. (As the second part of his application Dr Hubbard requested an amendment of the Code to facilitate corrections of this sort in the future without recourse to the plenary power.)

As Chairman of the two committees on ornithological nomenclature, I canvassed the committee members for their views on the application only as it related to the name of the Crissal Thrasher (leaving it to them, as individual zoologists, to write to the Commission, if they wished, on the proposed Code amendment).

The bird species involved occurs only in the United States and Mexico. All members of the American Ornithologists' Union Committee on Classification and Nomenclature (whose function is to determine scientific names for the periodically issued 'Check-list of North American Birds') have expressed support for *Toxostoma crissale*, as proposed by the applicant. A majority also of the members of the International Committee on Ornithological Nomenclature (including the two from North America) have written to me to express support; no member has indicated opposition.

The International Commission is accordingly requested to conserve *crissale*. (Since writing the above I have heard from several European members of the International Committee who had not written previously. I can now tell the Commission that the members of both ornithological committees are unanimous in supporting Dr Hubbard's application. With such unanimity among ornithologists it is hoped an early decision can be made.)

FURTHER COMMENT ON THE PROPOSED DESIGNATION OF A TYPE SPECIES FOR *PLEUROCERA* RAFINESQUE, 1818. Z.N.(S.) 83

(see vol. 33, pp. 105–113; vol. 34, pp. 196–199; vol. 36, pp. 139–146, 196–197)

By Y.I. Starobogatov (*Zoological Institute, Academy of Sciences, Leningrad, USSR*)

The name *Pleurocerus acutus* appeared in Blainville, 1824 (*Dict. Sci. nat.* vol. 32, p. 236) and, as stated by Dr Stein, is the same as *Pleurocera acuta* Rafinesque, 1831. We cannot attribute this specific name to Blainville because, as this author himself said, he had seen neither the animals nor the shell – in spite of the fact that Rafinesque had not mentioned the name previously. Consequently, *Pleurocerus* Rafinesque, *in* Blainville, 1824, is an erroneous subsequent spelling of *Pleurocera* Rafinesque, 1818, but the name *acutus* must be attributed to 'Rafinesque *in* Blainville, 1824'.

Two further species were added to the genus with available names in 1831 – *P. gonula* (p. 2) and *P. quadrosa* (p. 3).

I am strongly against all proposals to change the type species of *Pleurocera* and ask the Commission:

(1) to place the generic name *Pleurocera* Rafinesque, 1818 (type species, by subsequent monotypy, *Pleurocera verrucosa* Rafinesque, 1820), on the Official List of Generic Names in Zoology;

(2) to place on the Official List of Specific Names in Zoology
   (a) *verrucosa* Rafinesque, 1820, as published in the binomen *Pleurocera verrucosa*;
   (b) *acuta* Rafinesque, 1831, as published in the binomen *Pleurocera acuta*.

In addition, I ask American malacologists to designate a neotype for *Pleurocerus oblongus* Rafinesque *in* Blainville, 1824, using for that purpose a specimen of *Pleurocera verrucosa*, in order to clarify the status of this name.

COMMENT ON THE PROPOSED CONSERVATION OF *LETHOCERUS* MAYR, 1853 (INSECTA, HEMIPTERA). Z.N.(S.) 2161

(see vol. 35, pp. 236–238)

By I.M. Kerzhner (*Zoological Institute, Leningrad 199164, USSR*)

I fully support the proposal of Dr Menke. At the same time, I must point out that *Belostoma fakir* Gistel "[1847]", in Gistel & Bromme, *Handb. Naturges.*, 1850, p. 626, is a senior synonym of *Lethocerus cordofanus* Mayr, 1853. It is therefore the former name, not the latter, that should be placed on the Official List of Specific Names in Zoology as the valid name of the type species of *Lethocerus*. I may add that the date "1850" on the title page of Gistel & Bromme's work appears to be correct.

L. cordofanus has generally been used for this species, as the following references show: Hoberlandt, 1954, *Acta ent. Mus. nat. Pragae* vol. 29, p. 145;

Jaczewski, 1936, *Ann. Mus. zool. Polon.* vol. 11, p. 190; Jordan, 1970, *Handb. Zool.* vol. 4(2), 2/20, p. 9; Linnavuori, 1960, *Ann. zool. Soc. Vanamo*, vol. 22, p. 51; 1964, *Ann. Zool. Fenn.* vol. 8, p. 355; Lundblad, 1933, *Arch. Hydrobiol.*, Suppl. 12, p. 52, and Dr Menke's own references to Lauck & Menke, 1961, Menke, 1960, 1963, and Popov, 1971. It would accordingly be possible to ask for the suppression of *Belostoma fakir* under the provisions of Articles 23a–b and 79b. However, Dr Menke has pointed out to me that the former Article says: 'A zoologist who considers that the application of the Law of Priority would in his judgment disturb stability . . ., and although *L. cordofanus* has been widely used in both taxonomic and non-taxonomic works, it scarcely qualifies for conservation by that means. The species is of no economic importance, and I accept Dr Menke's argument that *L. fakir* (Gistel) will quickly become established.

It must be remembered that the name *niloticus* Stål, 1855, was in general use for this species through the second half of the nineteenth century when *cordofanus* Mayr, 1853 was considered doubtful because given to a nymph. Even after Montandon and Kirkaldy rejected *niloticus* as a junior synonym of *cordofanus* in 1907–1909, both names continued to be used. The introduction of *fakir* will thus put an end to this confusion.

Editor's Note: Dr. Menke has written to say "I agree that *fakir* is the name to be put on the Official List. 3.3.80."

COMMENTS ON THE PROPOSED AMENDMENTS TO THE INTERNATIONAL CODE OF ZOOLOGICAL NOMENCLATURE REGARDING ICHNOTAXA. Z.N.(S.) 1973

By Richard G. Bromley and Franz T. Fürsich,
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In its present form, the International Code of Zoological Nomenclature (ICZN) does not provide for the nomenclature of ichnotaxa. Recent attempts by ichnologists to have the nomenclature of trace fossils recognized and protected by the ICZN have been outlined by Basan, 1979. The article by Melville, 1979, on paranomenclature now offers considerable hope for a step towards the stabilization of ichnotaxa. If the amendments to the ICZN that Mr. Melville proposes are accepted by the Commission, then several of the existing problems of ichnotaxonomy will be alleviated. However, there are some points in the proposed amendments to which ichnologists will take exception, and this would seem to be a suitable moment to air these matters, while there is still a possibility of adjusting the wording of the proposed new edition of the Code. It is hoped that the following comments will elucidate the ichnologist's special problems of nomenclature, a system that would seem to be further removed from zoological nomenclature than most zoologists realize.

PRINCIPLES OF ICHNOLOGY

2. Before going further, it will help to reiterate six of the principles of ichnology, since these have a direct bearing on the present discussion. (Their numbering herein is entirely for the purposes of this article.)

Principle I. Trace fossils are structures produced in sediments and hard substrates (either organic or inorganic in origin) by the activity of organisms (animals, plants and protistans).

Principle II. The nomenclature of trace fossils is based solely upon the morphological characteristics of the structure.

Principle III. A particular structure may be produced by the work of two or several different organisms living together, or in succession, within the structure.

Principle IV. The same individual or species of organism may produce different structures corresponding to different behaviour patterns.

Principle V. The same individual or species of organism may produce different structures corresponding to identical behaviour but in different substrates, e.g. in sand, in clay, or at sand-clay interfaces.

Principle VI. Identical structures may be produced by the activity of systematically different trace-making organisms, where behaviour is similar.

3. These principles are fundamental to ichnology, and unless they are taken into account in the present discussion of the status of ichnological names, the resulting amendments to the Code will not be satisfactory to users of trace fossil nomenclature. Let us, then, discuss Mr. Melville's remarks in the light of the six principles stated above.

4. It is clear from Principle I that trace fossils cannot logically be considered as biological parataxa. They are not "fossil fragments or detached organs . . . of the more complete fossils to which they belong" (Melville, 1979, p. 11). As sediment structures, trace fossils are to be contrasted with body fossils, which are the fossilized bodily remains of organisms. However, in one way they resemble biological parataxa for, as Mr. Melville recognizes, "a single animal may produce a variety of structures" (Principle IV above).

5. A disadvantage in covering trace fossils by the ICZN is that many trace fossils are produced by plants (algal borings, fungal borings, lichen borings, root bioturbation and possibly algal stromatolites). Furthermore, it is not always clear to which Kingdom a trace-maker belonged on the evidence of the trace fossil alone. In any case, we must assume that the ICZN is only intended to cover a trace fossil which the palaeontologist can convince himself was produced by animal activity; the remaining taxa will remain homeless.

6. That was one of the reasons for Sarjeant & Kennedy proposing in 1973 an Ichnological Code entirely divorced from the Zoological and Botanical Codes. Their code was not a suggested proposal for amending the ICZN, and Mr. Melville need have no fear that it 'introduces into the Animal Kingdom a number of nomenclatural principles that are foreign to our Code'. On the contrary, its intention was to extract trace fossils entirely from the ICZN.

A version of the Sarjeant & Kennedy 1973 proposal, adapted for presentation at the International Geological Congress meeting in Sydney, has been published by Sarjeant, 1979, but has not found general acceptance among ichnologists.

7. The second principle is not universally accepted. This is because ichnologists comprise a spectrum of workers having widely different backgrounds, and whose approach to trace fossil nomenclature consequently varies greatly. At the one end of the spectrum stands the sedimentologist, who uses trace fossils as tools in elucidating palaeoenvironments. At the other extreme there is the zoologist, examining a group of endolithic animals and treating their fossil borings nomenclaturally as body fossils.

8. The use of morphology as the basis of nomenclature is far from free of problems. For example, the trace fossil may reveal the original morphology of an animal burrow, or this may have been drastically modified by diagenetic processes. A greater problem is that morphology may vary considerably in different parts of a single burrow system. In practice, when these different parts are found or occur separately they receive different names. (There is room here for a system of ichnoparataxa and collective-group ichnotaxa, but this problem has not yet been closely looked at.)

9. It is clear, however, that a dual nomenclature is not merely unavoidable, but in fact is indispensable, the trace fossil being covered by an ichnotaxon and the trace-maker by a zoological or botanical taxon. Only in the case of individual occurrences is there ever a chance of 'working out' the biological affinities of a trace fossil, where the body fossil of the trace-maker is preserved within the trace fossil, preferably in life position, having died in the act of creating the trace. No general cross-synonymization of the taxa of the twin nomenclatures can ever be possible (Principles III, IV, V and VI).

10. We suspect, nevertheless, that it is the aspiration of many palaeontologists that one day, when the fossil animal world is better understood than it is today, each trace fossil will be attributable to its trace-maker and the dual nomenclature will thereby be rendered unnecessary. We have a glimpse of this in Mr. Melville's closing sentence: "Traces of living animals can always be related to their causative organism, and there is no need to name them separately". Would that this were so! However, it is not uncommon that, for example, a fish, a crab and a shrimp, each capable of producing its own burrow, are found living commensally within a single burrow system (e.g. Atkinson, 1974). The basic branching plan of the system may owe its origin to the shimp's excavation pattern, the enlarged diameter to the crab, the modified entrances to the fish; but the truth may be far less simple than that. Again, bivalves commonly are found inhabiting cavities in hard substrates. Did they bore these themselves or are they merely nestling in borings produced by another species or, again, as a compromise, have they modified previously existing borings to suit their own requirements (Principle III)? The boring can be named at once, but its biological affinities may never be clearly understood.

11. Principle IV has been acknowledged by Mr. Melville, and he suggested that "names proposed for fossil ichnotaxa . . . do not compete in priority with names given to causative organisms". This is a most welcome suggestion, and its acceptance will at last give impact to the twin trace-versus-body nomenclatures.

12. Principle V concerns the effects of the stratinomic and diagenetic aspects of trace fossils on their nomenclature. A burrow produced in clay and filled with clay will suffer a different diagenetic history from a sand-filled

burrow in sand. Again, burrows that cross lithic interfaces may receive contrasting filling material, or be preserved as half-reliefs on sole surfaces of sandstones. They may even remain empty. Furthermore, clay substrates retain scratch traces due to the activity of the excavator, whereas sand substrates do not. The resulting trace fossils, although having similar origins, will show a great range of morphology.

13. The sixth principle is less easily accommodated by the ICZN than no. IV, and has been mentioned neither by Sarjeant & Kennedy, 1973, nor by Melville, 1979. Misunderstanding of this principle has commonly led to misinterpretation by those who too readily equate their trace fossils with causative organisms. Twin nomenclatures, however, will also greatly simplify this problem.

FOSSIL OR NOT FOSSIL

14. Mr. Melville's closing sentence emphasizes another point of difficulty: whether or not ichnotaxa should be limited to fossil material. The reason for hesitating in admitting ichnotaxa to the neontological realm is clear. The entomologist would regard a dual nomenclature for insect galls in plants as completely superfluous, a mere encumbrance. Each gall type can be worked out and ascribed to the causative species of insect. Likewise, a crustaceologist would regard it as laughable to consider the faecal pellets lying within the gut of a hermit crab as requiring a name, let alone a name different from that of the crab. The palaeontologist, however, views the situation quite differently; fossil galls and coprolites must be compared with neontological material in order that progress be made.

15. The existence of twin nomenclatures should satisfy both parties. The neontologist need never refer to ichnological taxonomy. It is the palaeontologist alone who has need of both. But the restriction of ichnotaxa to fossil material seems a needless hindrance and carries with it further problems, for example, the definition of the fossilization threshold. In the case of the organism itself, there are fairly distinct boundaries between the categories: living organism; dead body; body fossil. These boundaries are far from obvious, however, in the case of trace fossils. When does the work of an animal become fossilized?

16. The passage of a heart-urchin through sediment causes one sediment structure to be replaced by another. If the sediment remains unlithified, one might argue that the structure never becomes fossilized. In limestone, a cavity produced by a boring sponge is a ready-made fossil that may change little with diagenesis after the death of the sponge. To prohibit the use of ichnotaxa for these structures will inflate the importance of the 'fossilization barrier' and reduce our chances of crossing it.

17. To give a further example: if the fossilized remains of *Callianassa major* were to be found in a Pleistocene *Ophiomorpha nodosa*, the structure could be described equally accurately as 'the burrow of *C. major*' or as '*O. nodosa*'. If, however, these twin nomenclatures are not to be used on our side of the 'fossilization barrier', we shall have a cumbersome descriptive system. On a modern beach we may identify 'the burrow of *C. major*' only with immense skill, by capturing the inhabitant. On the other hand, the structure itself may only be named 'a burrow that, upon fossilization, will be *O. nodosa*';

or perhaps we could call it an 'incipient *O. nodosa*'. But how are we to deal with the bioturbated sediment that we retrieve in box cores from the sea floor, or bioerosion sculptures on rocky sea floors, when the trace-makers themselves are not in evidence? The morphology of the traces is eminently describable, but their attribution is a matter of speculation. Or may we consider these traces, once they are divorced from their makers, to be in the first stages of 'fossilization' and therefore genuinely deserving of ichnotaxa?

CONCLUSIONS

18. We would ask the Commission to recognize the existence of twin nomenclatures covering 'the work of an animal' and 'the animal' respectively. The two nomenclatures would have equal status and would not compete in priority.

19. We urge that ichnotaxa should not be restricted to fossil material; that the word 'incipient' precede ichnotaxa where the trace-making organism is still working; and that new ichnospecies should not be based on unequivocally unfossilized material.

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OPINION 1147
STATUS, FOR THE PURPOSES OF TYPE FIXATIONS, OF THE REMAINS OF CHIRONOMID LARVAE (INSECTA, DIPTERA) PROVIDED BY THIENEMANN TO KIEFFER FOR THE DESCRIPTION OF NEW SPECIES BASED ON THE ADULTS REARED FROM THOSE LARVAE

RULING.– (1) If, but only if, there is firm evidence of association of a given adult with the skins of its immature stages, those skins are biologically and for the purposes of nomenclature parts of that individual and therefore are parts of a holotype, paratype, syntype or lectotype, according to the status of the given adult in the original description, and to how the species has been subsequently treated, even if the skins had not been seen by Kieffer.

(2) If skins, or larvae, or pupae, or imagos not seen by Kieffer are from a brood or batch part of which had been examined by Kieffer, then those specimens not seen by Kieffer cannot be types of species established by him but are eligible for consideration if, after the loss of the adult originally described by Kieffer, it is necessary to designate a neotype.

HISTORY OF THE CASE Z.N.(S.) 1968

On 12 January 1970 a letter was received from Mr M. Hirvenoja (*Department of Zoology, University of Helsinki, Finland*) enquiring about the status, for the purposes of type fixations, of the remains of Chironomid larvae in the collection of the late Professor Thienemann. It was Thienemann's habit, at the beginning of this century, to collect larvae and pupae of Chironomid midges and to rear the adults which he then sent to the late Professor Kieffer for identification. Kieffer, in a number of papers, described many new species from material received in this way. Unfortunately, many of the adults are lost and the species cannot be recognised from the original descriptions. Thienemann, however, kept the larval and pupal skins, and from his careful notes it is possible in some cases, though not in all, to identify with certainty which larval remains belong to which species described by Kieffer from a single adult. Moreover, the species can be recognised from these larval remains.

Eventually, after some correspondence, a joint application by Mr Hirvenoja and Dr E.J.Fittkau (*Max-Planck Institut für Limnologie, Plön, Germany*) was agreed with the Secretary on 15 July 1971. It

was sent to the printer on 23 September 1971 and published on 31 December 1971 in *Bull. zool. Nom.* vol. 28, pp. 171–172. The subsequent history of the case is described in the following report by Dr I.W.B. Nye, Assistant Secretary to the Commission.

MODIFIED REQUEST FOR A RULING ON THE STATUS OF PUPAL AND LARVAL SKINS OF CHIRONOMIDAE (INSECTA, DIPTERA) IN THE THIENEMANN COLLECTION Z.N.(S.) 1968

By I.W.B. Nye (*Assistant Secretary, International Commission on Zoological Nomenclature*)

Dr M. Hirvenoja (*University of Helsinki, Finland*) first wrote to the Commission about the status of the Chironomid pupal and larval skins in the Thienemann Collection in the Max-Planck-Institut, Plön, B.R.D., on 10th January 1970. After some correspondence a joint application by Dr M. Hirvenoja and Dr E.J. Fittkau (*Max-Planck-Institut, Plön, B.R.D.*) was received on 5th April 1971, and was published on 31st December 1971 in *Bull. zool. Nom.* vol. 28, pp. 171–172. See Appendix 1.

2. Comments were received from:
   (a) Mr R.V. Melville (*Secretary, International Commission on Zoological Nomenclature*) published in *Bull. zool. Nom.* vol. 29, p. 64. See Appendix 2.
   (b) Dr O. Hoffrichter (*Albert Ludwig University, B.R.D.*) published in *Bull. zool. Nom.* vol. 29, p. 198. See Appendix 3.
   (c) Dr H. Lemche (*Universitetets Zoologiske Museum, Denmark*) published in *Bull. zool. Nom.* vol. 30, p. 76. See Appendix 4.
   (d) Dr James E. and Dr Mary F. Sublette (*Eastern New Mexico University, U.S.A.*) hitherto unpublished. See Appendix 5.
3. In June 1975 the members of the Commission were asked:
   (a) on Voting Paper (75)11 to vote on the proposals set out on page 172 of *Bull. zool. Nom.* vol. 28. See Appendix 1.
   (b) on Voting Paper (75)12 to vote on the proposals set out on page 64 of *Bull. zool. Nom.* vol. 29. See Appendix 2.

The issue on V.P.(75)11 was whether the pupal or larval remains in the Thienemann collection should be regarded as part of the syntype material or not, even if Kieffer never saw them. At the close of the voting period on 16 September 1975 there were 10 votes in favour and 8 against, with one late negative vote and two abstentions. The issue on V.P.(75)12 was whether *Microcricotopus parvulus* and *M. rectinervis* Kieffer could be interpreted by reference to the specimens designated by Fittkau & Lehmann (1970). At the close of the voting period on 16 September 1975 there were 16 votes in favour and 3 against, with one late affirmative vote and one abstention.

4. When studying the comments sent in by members of the Commission with their voting papers it was evident that the wording of both sets of proposals was unsatisfactory. The Secretary of the Commission has therefore, under By-Law 24, deferred publication of the decisions taken by the Commission and considers that the case should be reopened, the proposals reworded, and a new vote taken.

5. The following comments, on the proposals in Appendix 1, were sent in by members of the Commission with their voting papers:

(a) *Alvarado*: 'The proposal involves a serious problem, involving perhaps all the Code. Art. 16a(viii) and Art. 17(4) should be carefully considered before ruling on this case.'

(b) *Bayer*: 'The proposal of Hirvenoja & Fittkau (*Bull. Zool. Nom.* vol. 28, pp. 171–172) and alternative suggested by Melville (*Bull. Zool. Nom.* vol. 29, p. 64) raises some interesting questions and have parallels elsewhere in the animal kingdom. In addition to the insects, many crustaceans also have larval and post-larval stages different from the adults, not to mention differing adult stages according to breeding condition (as in fresh-water crayfishes), all of which leave behind moulted skins or casts that retain taxonomically usable morphological characters. Under Article 17(4) of the Code, any of these developmental stages may be used as a basis for a new taxon and, under Article 24b, names based on them compete in priority with one another and with names based upon the adult stage.

'Similar situations exist in the Coelenterata (Hydrozoa and Scyphozoa) and other invertebrate phyla as well as in some vertebrates that have distinct and taxonomically recognizable ontogenetic stages, but these differ in that they do not leave behind any preservable "morphological shadow".

'Hirvenoja & Fittkau ask that the developmental stages of certain chironomid midges, as represented by their cast skins, be recognized as syntypes of the species in question, even though the

author who described the species upon the adult stage never saw the larvae and/or pupae or their skins, and who, therefore, did not use them in establishing the species. The desirability, and the biological validity, of using these moults of developmental stages to settle taxonomic questions arising after the loss of the original, adult type specimens, are obvious. The question is how to do it within the framework of the Code.

'According to Article 45b, each taxon of the species group is objectively defined by reference to its type specimen. The species now in consideration were based on a single adult specimen each – i.e. a holotype (Article 73a). I think there is no doubt that the cast skins of the earlier stages are parts of the type specimens themselves, as already was pointed out by Commissioner Lemche (*Bull. Zool. Nom.* vol. 30, p. 76). Unfortunately, it must also be conceded that each of these skins is a separate "specimen" as that word is defined in the Oxford English Dictionary, vol. 10 (1933) 1961, and therefore it is not part of a syntypic series, because it was not used by the author in describing the species, even though biologically it is actually a part of the holotype.

'I am conceptually in favour of Hirvenoja and Fittkau's proposal, but I vote against it because I agree with Secretary Melville's opinion that a general ruling is undesirable at this time (*Bull. Zool. Nom.* vol. 29, p. 64). Based upon the Code as it stands, and upon accepted definition of words, I do not believe that cast skins of earlier stages of a holotype can be considered part of a syntypic series if they were not used by the describing author, as they are separate and distinct "specimens". Therefore, I do not agree with the Secretary's alternative proposal to rule that the specimens of *Microcricotopus parvulus* (Kieffer) and *M. rectinervis* Kieffer are lectotypes, as they are not eligible for that status, but I vote in favour of the proposal because these specific cases should be cleared up now. This can be accomplished in this way without prejudice to future consideration of the basic problem'.

(c) *Dupuis*: 'Je suis favorable à l'*esprit* des propositions de Hirvenoja & Fittkau de reconnaître l'éminente valeur de référence du matériel de Thienemann, mais non à la *lettre,* car je considère avec Lemche que les matériaux invoqués constituent une *partie de l'holotype* (de même que des genitalia d'insecte, montées en préparation séparée de l'imago, sont une partie de cet individu). Je pense, avec Melville, qu'une déclaration sur le cas général ne doit pas être hâtive, car elle est destinée à faire jurisprudence.

'Quant aux types désignés par Fittkau & Lehmann, je regrette, toutefois, que la proposition de Melville ne soit pas plus explicitement formulée (comme le souhaite en général Lemche, *Bull. Zool. Nom.* vol. 32, p. 2). Ces types ne représentent certainement pas des

néotypes; il ne s'agit pas non plus de syntypes (comme le pense Hoffrichter), ni de lectotypes (comme le croit Melville), mais bien des parties des holotypes. *Pour l'ensemble de ces raisons, je considère qu'il n'y a pas matière à voter dans l'immédiat.*

'J'ajoute, en vue d'un examen futur plus approfondi de la question, que la raison véritable de la requête de Hirvenoja & Fittkau me paraît tenir à l'insuffisance de la définition de l'holotype dans le Code et son inappropriation à certaines situations taxonomiques concrètes.

'Quant au fond, les holotypes, lectotypes et néotypes, réduits chacun à un spécimen unique et considéré comme base de la nomenclature m'ont toujours heurté car, de plus en plus, la base de la taxinomie devrait être la population et, dans l'intérêt de tous, la nomenclature ne peut vivre comme une abstraction coupée de la taxinomie. Pour cette raison, tout en affirmant la nécessité qu'un matériel type soit délimité et *fini*, je suis favorable à l'esprit des propositions de Corliss (*Bull. Zool. Nom.*, vol. 29, p. 92) et à toute proposition qui aurait pour effet de reconnaitre certaines autres catégories de types que les trois précédentes.

'Dans sa forme même et dans le cas particulier des insectes holométaboles, la notion de "spécimen unique" est insuffisante car il n'y a aucun doute que les restes des stades successifs d'un même *individu* holotype (chorion de l'oeuf, exuvies larvaires, exuvies nymphales, imago) ne soient autant de parties de cet holotype.

'La déclaration la plus utile (en attendant mieux) serait donc de préciser que "Par spécimen unique il faut entendre aussi bien un individu donné, plus ou moins intact, conservé en une seule institution, que les fragments d'un individu jadis entier ou les témoins des stades ontogénétiques successifs d'un même individu, que ces fragments ou témoins soient conservés en un ou en plusieurs lieux".

'L'on voit qu'une telle question mérite mieux que les votes mineurs auxquels je refuse de procéder.'

(d) *Eisenmann*: 'I must vote against the proposal to designate the Thienemann specimens "lectotypes" of Kieffer's nominal species if – as I understand the application – Kieffer never saw the Thienemann immature instars nor was provided with pictures of them (i.e. that are not mentioned in Kieffer's published descriptions). A lectotype under Art. 74 must be drawn from the original describer's type series, i.e. his syntypes; under Art. 73c and 73c(i) the syntypes are the specimens the describer examined or those published pictures and descriptions considered by him in describing the taxon. Unless Thienemann's instars were before Kieffer and considered by him, they cannot be called either lectotypes or syntypes. This is not merely a matter of language. Taxonomic

consequences can follow (as Melville correctly suggests, *Bull. Zool. Nom.*, vol. 29, p. 64). I agree with Melville that the matter may be handled by interpreting Kieffer's names by reference to Thienemann specimens identified by Fittkau and Lehmann, but a nomenclatural ruling should be made only in individual cases, if specialists are in agreement that the identification is correct – obviously a taxonomic question. On one point I disagree with Melville: I do not see how the Thienemann specimens (if not considered by Kieffer as part of his type series) can be designated lectotypes. It seems to me that, where adequately identified (and if the provisions of Art. 75 are otherwise met) the Thienemann specimens may be designated neotypes. In principle, the case is covered by Art. 75c(4); while that provision states that "if a nominal species is based on a sex or immature stage that lacks good diagnostic characters, the neotype may differ in that respect from the original material", I take this to be in effect an example of an appropriate situation, not intended as a limitation to types based on immature stages. The same principle should apply where the holotype was an adult and lacks the diagnostic characters known better in the immature stage, which can be demonstrated to be the same species "from its description and from other sources". To avoid any problem I would ask that a Declaration be issued removing from the Code, for clarification, the unnecessary and somewhat misleadingly restrictive word "immature" from Art. 75c(4). This change would not affect anything of substance but would clarify the intended meaning.'

(e) *Holthuis*: 'The larval or pupal skins of a specimen that later is made the holotype of a species are part of that holotype, and certainly are not syntypes and cannot be made lectotypes.'

(f) *Kraus*: 'The real proposal is limited to point (9) of the application. As it evidently has been possible to identify a number of species on the basis of pupal and larval skins in the Thienemann Collection, there are no longer any problems affecting the identification of those names introduced by Kieffer. I cannot see the necessity for a comprehensive ruling – at least this has not been explained sufficiently.'

(g) *Mayr*: 'The revised proposal does not state as clearly as might be that two questions are involved:

(a) a confirmation that larval and pupal skins are parts of the holotype, as should be evident from the Code; and
(b) whether a particular set of larval and pupal skins, labelled by the same name as that given to an imago type, was correctly labelled.'

(h) *Nye*: 'In a case where it can be established that the larval and pupal skins are the earlier stages of an adult described by Kieffer, the skins are part of the holotype or syntype concerned

and no ruling is necessary.

'In a case where there is no imago and there are no associated skins or where there are skins or larvae or pupae which may or may not be correctly associated, then it would be preferable to leave the option for the choice of a neotype in conformity with the Code, and again no ruling is necessary.'

(i) *Ride*: 'From paragraph 2 of the submission it appears that there are two classes of material involved, namely:

(1) skins of specimens seen by Kieffer (i.e. parts of primary types), and

(2) preserved specimens reared with those in (1) above but not seen by Kieffer.

Specimens in class (1) are parts of holotypes or of syntypes. Specimens in class (2) are not types but may be selected as neotypes where holotypes or syntypes are lost.

'There is no need for Commission action, but if there is any doubt in particular cases, action similar to that proposed in V.P.(75) 12 can be taken.'

(j) *Sabrosky*: 'I am sympathetic to the applicants' problem, but I question whether the Commission should make the ruling requested for a given collection. However, this would be an opportunity for the Commission to express a general view that would provide some guidance for the future and render future applications unnecessary. I suggest that a Declaration along the following lines be considered:

(1) Where there is firm evidence of association of a given adult and its immature stage (e.g. cast skins of larvae, or pupal skin, chrysalis, cocoon or puparium), these are to be regarded as parts of that individual.

(2) If that adult had been the sole type specimen, hence the holotype (designated or not), the remains of the immature stages are parts of the holotype, just as much as a separate wing on a slide, or a slide or capsule of the male or female genitalia. In the case of *Microcricotopus rectinervis* (Kieffer), with its implication that the species was described from only one specimen, the pupal skin of that specimen is part of the holotype, and no Commission action is needed.

(3) If a species was described from two or more specimens, and these can be positively associated with the remains of their immature stages (e.g. by corresponding numbers), the remains are parts of the specimens in the type series, i.e. parts of holotypes and paratypes or parts of syntypes, according to how the species was originally described.

(4) Resolution of the type problem outlined in the preceding paragraph depends on the material. If the remains of the immature stages of the holotype can be positively associated with it, they are parts of the holotype; if only paratypes can be so associated, the parts are parts of paratypes; if then the holotype is lost, the parts of paratypes may be useful and sufficient for recognition of the species; if the holotype is lost and immature stages cannot be associated, then a neotype may be required, depending on necessity, existence of recognizable remains of paratypes, etc.; if syntypes are represented by immature stages, the latter are parts of syntypes and eligible for lectotype designation.

'Responsibility for proper evaluation of the status of material rests with specialists themselves. I am unwilling to agree that the Commission should give a flat ruling in a given case because of the uncertainties involved. Can adults described by Kieffer be positively and individually associated with immature stages preserved by Thienemann, or is it a group association? Did Kieffer even indicate the number of specimens, so that agreement of published number and number of available immature would give a presumption of association? The applicants' mention of occasional errors suggests that the evidence must always be evaluated critically.'

(k) *Tortonese*: 'I agree with Lemche's proposal of having the whole case dropped (except the matter concerning V.P.(75)12).'

(l) *Vokes*: 'I feel that in the event that there was a disagreement of the sort mentioned by Mr. Melville, the problem would result in both taxonomic and nomenclatural issues that should be referred to the Commission – but that would certainly result in far fewer problems needing to be resolved than would the simple ruling on *M. parvulus* and *M. rectinervis* only.'

6. The following comments were sent in by members of the Commission with their voting papers for the proposals in Appendix 2:

(a) *Holthuis*: 'The pupal skin of *Microcricotopus rectinervis* mentioned by Hirvenoja & Fittkau is part of the holotype of that species and no action by the Commission is necessary. If the pupal skin of *M. parvulus* that Fittkau and Lehmann (1970) designated as neotype of that species is that of a syntype of *parvulus*, it could be made a lectotype, but not a neotype. Too little information is given here by the applicants.'

(b) *Sabrosky*: 'See my comment on V.P.(75)11. We have not been given detailed information on which to base a decision in these specific cases. If the Commission were to adopt the views I have expressed on the general case, the question of these two

species (and probably many others) can be settled by the applicants without reference to the Commission. I agree with Dr. Lemche except that for *M. rectinervis*, if the pupal shell is truly that of the only described specimen, it is part of the holotype, not lectotype.'

(c) *Ride*: 'I disagree that the specimens are to be considered lectotypes. In the case of *M. rectinervis* the specimen is a part of the holotype (i.e. a shed skin); in the case of *M. parvulus* there appears to be some doubt and the specimen is most safely to be regarded as a neotype.'

7. It is evident from the above comments that confusion has arisen because the proposals included two classes of material:

(a) preserved larval or pupal skins (not seen by Kieffer), of imagos which had been examined by Kieffer;

(b) preserved skins, or larvae, or pupae, or imagos (not seen by Kieffer), from a brood or batch including some individuals examined by Kieffer.

At this point, therefore, the Secretary wrote to Professor Hirvenoja for clarification of this issue. Dr Hirvenoja replied on 14th February 1976 as follows:

'. . . The main source of information is the notes of Professor Thienemann. We may there find, for instance, that one female has been reared from a stated locality; this implies a one-to-one relationship between the adult female and the pupal exuvia which will usually be mounted on a slide of which the label has the same words as the notes. In other instances we may read "(date) . . . an Kieffer . . . (date) . . . zurück", showing that Kieffer returned the specimens to Thienemann. In cases where several individuals were reared, it is a group relationship and the whole of the material may be in the Thienemann Collection, or it may be difficult to tell whether some specimens are in Brussels (I think Professor Thienemann gave the adults to Dr. Goetghebuer of Brussels when the latter prepared the Chironomid parts of Lindner's *Die Fliegen der Palaearktischen Region* and of the *Faune de France*; these specimens are now in the Brussels museum in a box marked "Types de Kieffer", but there are no Kieffer labels). Some of the adults have been lost.

'In spite of this, I have designated lectotypes from the collection in Brussels if the details agree with a single specimen in Plön. Current nomenclature follows the species concept derived from the metamorphosed material of Thienemann.

'The Thienemann specimens represent only a part of the species described by Kieffer. For instance, there are about 200 species of *Cricotopus* (or *Trichocladius*) in "Lindner", but it has been possible to redescribe only about 50 of these. The Thienemann

material was very important in my revision of this group (Hirvenoja, 1975, *Ann. Zool. Fennici,* vol. 10(1), pp. 1–363). There are several synonyms, but about a quarter of the names in the literature are regarded as nomina dubia!'

8. The general consensus from the comments by members of the Commission quoted above was that in cases of specimens in class (a) above, where there is firm evidence of association of a given adult with the skins of its immature stages, these skins are biologically and for the purposes of nomenclature parts of that individual, and therefore are parts of holotypes, paratypes, syntypes, lectotypes etc. according to how the species was originally described and subsequently treated. In cases of specimens in class (b) above, those specimens not seen by Kieffer cannot be types of species established by him but are eligible for designation as neotypes when the primary type (and its parts) is lost.

9. Once the Commission has ruled on the proposals in paragraph 10 below there is no need for any action by the Commission on *Microcricotopus parvulus* (Kieffer, 1909) and *M. rectinervis* (Kieffer, 1911). From the information given in the original application (see Appendix 1), the type of the former, established as *Cricotopus parvulus*, is a neotype, whereas the type of the latter, established as *Cricotopus rectinervis* must be a part of the holotype.

10. The International Commission on Zoological Nomenclature is asked to rule that in the case of species of CHIRONOMIDAE established by Professor J.J. Kieffer from adults provided by Professor A. Thienemann:

(a) if, and only if, there is firm evidence of association of a given adult with the skins of its immature stages, these skins are biologically and for the purposes of nomenclature parts of that individual and therefore are parts of holotypes, paratypes, syntypes, lectotypes etc. according to how the species was originally described and subsequently treated, even though the skins had not been seen by Professor Kieffer;

(b) if the skins, or larvae, or pupae, or imagos not seen by Kieffer are from a brood or batch part of which had been examined by Kieffer, then those specimens not seen by Kieffer cannot be types of species established by him but are eligible for designation as neotypes when the primary type (and its parts) is lost.

Appendix 1 (from *Bull. zool. Nomencl.* vol. 28: 171-172)

REQUEST FOR RULING ON THE STATUS OF PUPAL AND LARVAL SKINS OR PUPAE AND LARVAE IN THE THIENEMANN COLLECTION, ASSOCIATED WITH ADULTS WHICH HAVE BEEN DESCRIBED AND NAMED BY KIEFFER (INSECTA, DIPTERA, CHIRONOMIDAE). Z.N.(S.) 1968

By M. Hirvenoja (*Dept. of Zoology, University of Helsinki, Finland*) and E.-J. Fittkau (*Max-Planck-Institut für Limnologie, Plön, Germany*)

It was the practice of the late Professor August Thienemann, at the beginning of the century, to rear chironomid midges from larvae and pupae. The adults he sent to Professor J.J. Kieffer for identification. In his numerous publications Kieffer usually described and named the species, when new. Kieffer's adult material has in many cases been lost, and in any case it is often not possible to identify the species from the descriptions.

2. The Thienemann collection in Plön, Germany, contains several pupal skins or pupae and associated larvae or larval skins of the species sent to Kieffer and these were described by Thienemann in his papers on the metamorphosis of the midges.

3. Kieffer's descriptions of the adults are inadequate, but from Thienemann's descriptions of the larval and pupal instars and the specimens in his collection we can identify a number of Kieffer's species (Brundin 1956: 13; Wülker 1956: 4; Fittkau 1962: 6; Fittkau & Lehmann 1970: 392). If this were not the case we should have very many nomina dubia among European Chironomidae.

4. There have been occasional errors (cf. Fittkau & Lehmann 1970: 392), where the development stages in the Thienemann collection do not belong to the adult described under the same name.

5. The development stages may have greater value from the nomenclatural point of view than the adults, many of which have been lost and cannot be identified from Kieffer's descriptions especially where the specimen is a female.

6. Fittkau & Lehmann (1970) have designated as a neotype the pupal skins of *Microcricotopus parvulus* (Kieff.) and *M. rectinervis* (Kieff.) from the Thienemann collection. According to Thienemann (1912: 76) only one male specimen of the latter species has been reared. Thus the neotype in question logically is a part of the holotype described by Kieffer.

7. Since the pupae, larvae and especially the pupal and larval skins in Thienemann's collection are actually earlier stages of the adults Kieffer described, could they not be regarded as part of the type series, that is syntypes from which a lectotype could be designated?

8. It is not possible to apply Article 24b in this case, as that deals with the priority of names given to different parts of the same species.

9. The Commission is therefore requested to give a ruling that in the Kieffer-Thienemann problem in the Chironomidae:

The pupal and larval skins or pupae and larvae in the Thienemann collection are to be regarded as part of the syntype material in cases

where the revisor recognizes the association and may consequently be designated as lectotypes in spite of the fact that Kieffer never saw these pupal and larval skins or these pupae and larvae.

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Appendix 2 (from *Bull. zool. Nomencl.* vol. 29: 64)

COMMENT ON THE APPLICATION CONCERNING PUPAL AND LARVAL STAGES OF CHIRONOMIDAE IN THE THIENEMANN COLLECTION. Z.N.(S.) 1968

(see volume 28, pages 171-172)

By R.V. Melville (*Secretary, International Commission on Zoological Nomenclature*)

It seems to me that the applicants in this case are asking the Commission to make a general ruling that is contrary to the spirit (though admittedly not infringing the letter) of Article 74(c). Furthermore, the ruling requested might be held to trespass into strictly taxonomic territory, especially if, for example, two revisors disagreed on subjective grounds as to the association of a particular Thienemann instar with a particular Kieffer adult. If such a situation were to arise, the existence of a ruling by the Commission that all Thienemann's instars were available for designation as lectotypes might be held to prejudice the taxonomic situation. On the other hand, a request for a ruling that *Microcricotopus parvulus* (Kieffer) and *M. rectinervis* Kieffer were to be interpreted by reference to the specimens designated by Fittkau and Lehmann (1970) would be unobjectionable; and later cases of the same kind can be dealt with individually on their merits. The ruling should make it clear that the specimens involved in the present application are lectotypes, not neotypes.

Appendix 3 (from *Bull. zool. Nomencl.* vol. 29: 198)

COMMENT ON THE PROPOSED RULING ON THE STATUS OF SPECIMENS IN THE THIENEMANN COLLECTION. Z.N.(S.) 1968

(see volume 28, pages 171–172)

O. Hoffrichter (*Biological Institute, Albert Ludwig University, Freiburg im Breisgau, Germany*)

I would like to comment on the paper from Drs. Hirvenoja and Fittkau (*Bull. zool. Nomencl.* 28, 5/6, 1971 : 171–172), from whom I received a separate. I strongly support the authors' request specified therein. It seems that in the insects alone there is the situation of three different stages attributable to a single individual. While, in general, the imago is taken as holotype, it is possible to do this with any stage. I know the Plön collection of Thienemann's material, which is in an excellent state. At the present time, I myself have borrowed some material from it. As Kieffer usually did not preserve the imagines the metamorphosis stages deposited in Plön are the only remainders of the individuals which constituted holotypes of many species. Thus, it is only reasonable to comply with the author's request.

Even if there were larval and/or pupal skins of species which in these stages cannot be identified to the species by themselves until now, it can be foreseen that in the future there will be more details available for identification, when modern or more refined methods of description and determination (multi-variate analysis e.g.) are applied to them. Since these skins would be "per se" the key species of an identification key, it seems almost inevitable to rule them as syntype material. By ruling according to the author's proposal, quite a number of species of Chironomidae could finally receive existing types. This is very desirable, as currently many revisers are involved in a worldwide revision of many groups of this family.

Appendix 4 (from *Bull. zool. Nomencl.* vol. 30: 76)

COMMENT ON THE PROPOSED RULING ON THE STATUS OF SPECIMENS IN THE THIENEMANN COLLECTION Z.N.(S.) 1968

(see volumes 28, pages 171–172)

By Henning Lemche (*Universitetets Zoologiske Museum, Copenhagen, Denmark*)

The shells of foraminifera, brachiopods, and molluscs, etc., etc., as well as innumerable fossils of different kinds are based on less than whole specimens but are nevertheless at any time accepted for selection as primary types.

The only unfortunate thing in the problem as here presented seems to me to be that Fittkau & Lehmann (1970) have designated a "neotype" instead of following the normal procedure and make it part of the holotype.

May I suggest that the label in question is altered accordingly, and that the whole case may then be dropped.

Appendix 5

COMMENT ON THE REQUEST FOR A RULING ON THE STATUS OF PUPAL AND LARVAL SKINS OR PUPAE AND LARVAE IN THE THIENEMANN COLLECTION, ASSOCIATED WITH ADULTS WHICH HAVE BEEN DESCRIBED AND NAMED BY KIEFFER (INSECTA, DIPTERA). Z.N. (S.) 1968

(See Volume 28, pages 171–172)

By James E. and Mary F. Sublette (*Eastern New Mexico University, Portales, New Mexico, U.S.A.*)

We would support the request to recognize the Thienemann larval and pupal specimens as part of a syntypic series which included the adults described by Kieffer only if the association is unequivocally assured by either (1) a statement in a publication of Thienemann that the adults were described by Kieffer, or (2) the curated material at Plön bears an original label which states the material is associated with adults described by Kieffer.

In light of the generally poor quality of the Kieffer descriptions, a designation of a lectotype from the Thienemann material would promote stability in a family notorious for nomenclatural change.

DECISION OF THE COMMISSION

Dr Nye's report was circulated on 22 November 1977 with Voting Paper (1977)27, in which the members of the Commission were invited to vote for or against the proposals set out in paragraph 10 of the report. At the close of the voting period on 22 February 1978, the state of the voting was as follows:

Affirmative Votes – fifteen (15) received in the following order: Melville, Brinck, Holthuis, Eisenmann, Alvarado (a conditional vote with the majority), Vokes, Sabrosky, Tortonese, Corliss, Starobogatov, Dupuis, Nye, Bayer, Heppell, Ride.

Negative Votes – two (2): Mroczkowski, Cogger.

Late affirmative votes were returned by Habe and Welch. Bernardi was on leave of absence. No voting papers were returned by Binder, Kraus and Willink.

The following comments were sent in by members of the Commission with their voting papers:

Eisenmann: 'I favour clearing up the problems of the individual case, but do not wish my vote taken as a position on the complex general principle.'

Alvarado: 'At a consultative meeting of the Entomological Group of the Real Sociedad Española de Historia Natural we did not reach a conclusive opinion. I therefore prefer to vote with the majority.'

Mroczkowski: 'I must vote against the modified request for a ruling on the status of pupal and larval skins in the Thienemann collection, and in particular against part (a) of the request. My objections are as follows:

'(1) The pupal or larval skin and the adult reared from the same specimen are biologically parts of the same individual, but are different objects, and therefore for the purposes of nomenclature are not the same. Likewise in Gastropoda, the shell and the body are two different "objects" of one specimen.

'(2) The description of species based on only one "object" is not so exhaustive as one based on all "objects". If the author examined some "objects" of one specimen, the taxonomic conclusions may be different from those reached if only one "object" is examined. Typical cases arise in Gastropoda: descriptions based on shell and body and those based on empty shells only lead to different taxonomic conclusions.

'(3) "The type series of a species consists of all the specimens on which its author bases the species . . ." [Code Art. 72b]. For me it is clear that only the objects that the author of the species had at his disposal make the type series. "Objects" of the same specimen that were not at the describer's disposal cannot be called holotype, paratype, syntype or lectotype.

'(4) In the new edition of the Code, one word in Art. 72b should be changed: "specimens" should be replaced by "material".

'(5) In consequence, neither of the classes of material in the Thienemann collection belongs to the type series, but these specimens should be given preference if and when neotypes are designated.'

Cogger: 'Given the wording of the first part of the proposal and the ambiguity of the second part, I must vote against it.

'Although I agree with the intention of part (a), the issue concerns the "given adult" and so the phrase' ". . . according to how the species was originally described . . ." should more properly read ". . . according to the status of the given adult in the original description." [This improved wording has been incorporated into the ruling. R.V.M.]

'The intention of part (b) is surely covered, at least in part, by part (a), i.e. it covers those cases in which there is no firm evidence of association of a given adult with the skins of its immature stages. However, this part of the proposal seems to run contrary to Art. 73c by automatically excluding from type status specimens

that may indeed be types, even though they are not at this time identifiable as such; how, under the circumstances described in this part, does one determine with certainty that the primary type and *all* its parts are lost?' [Dr Nye observes: 'There can be no certainty that *all* parts are physically lost, but if unlabelled as such they are "lost" so far as the type series is concerned.']

ORIGINAL REFERENCES

Since no names, nor any titles of works, were placed on any Official List or Index by the Ruling given in the present Opinion, there are no original references to be cited.

CERTIFICATE

I certify that the votes cast on V.P.(77)27 were cast as set out above, that the proposal contained in that voting paper has been duly adopted, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1147.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
18 December 1979

OPINION 1148
STABILISATION OF THE GENERIC NAME *ORCHELIMUM* AUDINET-SERVILLE, 1838 AND THE SPECIFIC NAME *ORCHELIMUM VULGARE* HARRIS, 1841, (INSECTA, COLEOPTERA) BY USE OF THE PLENARY POWERS

RULING – (1) Under the plenary powers, the following specific names are hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy:

(a) *glaberrimum* Burmeister, 1838, as published in the binomen *Xiphidium glaberrimum*;

(b) *cuticulare* Audinet-Serville, 1838, as published in the binomen *Orchelimum cuticulare*.

(2) The generic name *Orchelimum* Audinet-Serville, 1838 (gender: neuter), type species, by subsequent designation by Kirby, 1906, *Orchelimum cuticulare* Audinet-Serville, 1838, is hereby placed on the Official List of Generic Names in Zoology with the Name Number 2097.

(3) The specific name *vulgare* Harris, 1841, as published in the binomen *Orchelimum vulgare,* (the valid specific name, through the suppression of *Xiphidium glaberrimum* under the plenary powers in (1) (a) above, of the type species of *Orchelimum* Audinet-Serville, 1838) is hereby placed on the Official List of Specific Names in Zoology with the Name Number 2699.

(4) The following specific names, as suppressed under the plenary powers in (1) (a) and (1) (b) above, are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology with the Name Numbers specified:

(a) *glaberrimum* Burmeister, 1838, as published in the binomen *Xiphidium glaberrimum* (Name Number 1061);

(b) *cuticulare* Audinet-Serville, 1838, as published in the binomen *Orchelimum cuticulare* (Name Number 1062).

HISTORY OF THE CASE Z.N.(S.) 2060

An application for the stabilisation of the generic name *Orchelimum* Audinet-Serville, 1838 and the specific name *Orchelimum vulgare* Harris, 1841, was first received from Dr V.R. Vickery (*Lyman Entomological Museum, Macdonald Campus of McGill University, Ste. Anne de Bellevue, Quebec, Canada, H9X 3M1*) on

14 January 1974. The text of the application was agreed but was held back pending the publication of a relevant paper by Vickery & Johnstone in 1974 (*Canadian Entomol.* vol. 106, pp. 423–428) and was sent to the printer on 27 August 1974. It was published on 31 December 1974 in *Bull. zool. Nom.* vol. 31, pp. 218–220. The application was supported by Dr Ashley B. Gurney (*Systematic Entomology Lab USDA, c/o U.S. National Museum, Washington D.C. 20560*) and Professor T.J. Walker (*Institute of Food and Agricultural Sciences, University of Florida*). A proposal for a modification of the formal proposals was put forward by Dr Lemche (*Bull. zool. Nom.* vol. 32, p. 134). No adverse comment touching the main object of the application was received.

DECISION OF THE COMMISSION

On 7 April 1978 the members of the Commission were invited to vote on Voting Paper (1978) 7 for or against the proposals set out on p. 219 of vol. 31 and modified on p. 134 of vol. 32 of the *Bulletin of zoological Nomenclature*. At the close of the voting period on 7 July 1978 the state of the voting was as follows:

Affirmative Votes – 20 (twenty) received in the following order: Melville, Holthuis, Eisenmann, Brinck, Vokes, Sabrosky, Cogger, Habe, Mroczkowski, Tortonese, Binder, Willink, Nye, Alvarado, Corliss, Starobogatov, Heppell, Welch, Bayer, Ride.

Negative Vote – Bernardi.

No voting papers were returned by Dupuis and Kraus.

ORIGINAL REFERENCES

The following are the original references to names placed on Offical Lists and an Official Index by the ruling given in the present Opinion:

cuticulare, Orchelimum, Audinet-Serville, 1838, *Hist. nat. Ins. Orth.*, pp. 523–524

glaberrimum, Xiphidium, Burmeister, 1838, *Handb. Ent.* vol. 2(2), Part 1, p. 707

Orchelimum Audinet-Serville, 1838, *Hist. nat. Ins. Orth.*, p. 522

vulgare, Orchelimum, Harris, 1841, *Rep. Ins. Mass. injur. Veget.*, p. 130.

The following is the reference to a type-species fixation accepted in the ruling given in the present Opinion: of *Orchelimum cuticulare* Audinet-Serville, 1838 as type species of *Orchelimum* Audinet-Serville, 1838 by Kirby, 1906, *Syn. Cat. Orth., II, Orth. Salt.*, vol. 1, p. 273.

CERTIFICATE

I certify that the votes cast on Voting Paper (78)7 were cast as set out above, that the proposal contained in that voting paper has been duly adopted under the plenary powers, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion Number 1148.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
18 December 1979

MESOPLODON GERVAIS, 1850 (MAMMALIA: CETACEA): PROPOSED CONSERVATION. Z.N.(S) 2081.

By Dale W. Rice (*National Marine Mammal Laboratory, 7600 Sand Point Way N.E., Bldg. 32, Seattle, Washington 98115*) and Kenneth E. Kinman (*665 West 3rd, Hoisington, Kansas 67544, USA*)

The purpose of this application is to request the suppression of *Nodus* Wagler, 1830, so that *Mesoplodon* Gervais, 1850, can continue to be used in its generally accepted sense for a genus of beaked whales in the family ZIPHIIDAE.

2. Hershkovitz, 1966 (Catalog of living whales, *Bull. U.S. natn. Mus.* No. 246: 125) lists five generic names that have priority over *Mesoplodon*, a genus containing 12 species. The following synonymy lists the names relevant to the present discussion:

Aodon Lesson, 1828 (*Hist. nat. Mamm. Ois.* 1788, vol. 1: pl. 3), type species: *Aodon dalei* Lesson, 1828 (: 149, pl. 3), by monotypy. *Aodon* Lesson, 1828, is a junior homonym of *Aodon* Lacépède, 1789, – Pisces.

Nodus Wagler, 1830 (*Nat. Syst. Amphibien:* 34). Established as an objective replacement name of *Aodon* Lesson, 1828, type-species *Aodon dalei* Lesson, 1828, a junior subjective synonym of *Physeter bidens* Sowerby, 1804 (*Trans. Linn. Soc. Lond.*, vol. 7: 310).

Micropterus Wagner, 1846 (in Schreber, *Säugethiere*, vol. 7: 352), type species: *Delphinus micropterus* Cuvier, 1829 (*Règne animal*, ed. 2, vol. 1: 288), by monotypy. *D. micropterus* is a junior subjective synonym of *Physeter bidens* Sowerby, 1804. *Micropterus* Wagner, 1846, is a junior homonym of *Micropterus* Lacépède, 1802, – Pisces.

Micropteron Eschricht, 1849 (*Kongl. dansk. Vidensk. Selsk. Skr.*, ser. 5, vol. 1: 97). An incorrect subsequent spelling of *Micropterus* Wagner, 1846. *Mikropteron* Eschricht, 1849 (: 98). An incorrect subsequent spelling of *Micropterus* Wagner, 1846.

Dioplodon Gervais, 1850 (*Annales Sci. nat.*, ser. 3 (Zool.), vol. 14: 16, lines 19-20), type species *Delphinus densirostris* Blainville, 1817 (*Nouv. Dict. Hist. nat.*, vol. 9: 178) by original designation.

Mesoplodon Gervais, 1850 (: 16, line 26), type species *Delphinus*

sowerbensis Blainville, 1817 (:177), by original designation. *D. sowerbensis* is an unnecessary objective replacement name for *Physeter bidens* Sowerby, 1804.

3. *Aodon* and *Micropterus,* being preoccupied, need not concern us here. Hershkovitz (: 127) discusses the status of the other names in the following passage: 'As shown in the generic synonymy, the names *Nodus* Wagler, *Micropteron* Eschricht, and *Dioplodon* Gervais take priority, in the order given, over *Mesoplodon* Gervais. The first, *Nodus,* has had no currency as a senior synonym of *Mesoplodon.* It has, instead, been cited incorrectly as a junior synonym of *Hyperoodon* Lacépède (cf. Ellerman & Morrison-Scott, 1951; Hall & Kelson, 1959). The second, *Micropteron,* has been used rarely in the primary literature and never during this century. Both *Nodus* and *Micropteron* would be regarded as nomina oblita by adherents to Article 23 of the International Code of Zoological Nomenclature. *Dioplodon* was published simultaneously with *Mesoplodon* but generally has been cited from a later publication. Although *Dioplodon* has line priority over *Mesoplodon,* it may be treated as a junior synonym of it in accordance with Article 24a(i) of the International Code.'

4. The generic names *Micropteron* and *Mikropteron* were used by Eschricht, 1849 (:97, 98). A translation of the usage on page 97 is as follows: 'It is perhaps safe to compare fossil species whose exact correspondence with living species has been fully established with those of the genus *Micropteron,* whereas the rest should at least for the time being remain under the common designation of *Ziphius'.* A translation of the usage on page 98 is as follows: '. . . . . Failing that, the name of the bottle-nosed whales, Rhynchoceti, appears to be most suitable, and this group would therefore consist of the following genera: 1) *Chaenocetus,* the true bottle-nosed whale or duck whale, 2) *Mikropteron,* the short-finned bottle-nosed whales to which, apart from the still-living *Delphinus micropterus,* further fossil species would have to be added, and 3) *Ziphius* as an at least provisional generic name for the fossil bottle-nosed whales whose generic characteristics it has not yet been possible to determine.' There is no evidence in these extracts nor in the rest of the work that these names are anything other than incorrect subsequent spellings of *Micropterus* Wagner, 1846. However. Hershkovitz, 1961 (*Fieldiana Zool.,* vol. 39: 557) stated '*Micropterus* Wagner is invalidated by *Micropterus* Lacépède, 1802, a genus of fish. In 1849, however, Eschricht (*Kongl. Danske Vidensk. Selsk. Skrift.,* (5), 1: 97) independently erected the same generic tautonym for *Delphinus micropterus* Cuvier but wrote it *Micropteron.* This form of the name is valid.' Hershkovitz made no

mention of *Mikropteron.*

5. Hershkovitz, 1961 (: 557) used *Nodus* as a valid name, but later (1966: 125) he considered this name to be a nomen oblitum and used *Mesoplodon* Gervais, 1850. The Zoological Record shows the following works published from 1970 to 1973 alone in which *Mesoplodon* is used as a valid name:

Dixon, J.M., 1970, *Victorian Nat.,* vol. 87: 88–93.
Ross, G.J.B., 1970, *Ann. Cape Prov. Mus.,* vol. 8:195–204
Sergeant, D.E. and others, 1970, *J. Fish. Res. Board Canada,* vol. 27: 1903–1915.
Smet, W.M.A. de, 1970, *Naturalistes Belg.,* vol. 51: 118–124.
Varona, L., 1970, *Poeyana* (A) (69): 1–17.
Besharse, J.C., 1971, *J. Mammal.,* vol. 52: 297–315.
Best, P.B., 1971, *Mammals of Africa* (Washington D.C.): 2.
Caldwell, D.K. & Caldwell, M.C., 1971, *J. Mammal.,* vol. 52: 206–209;
Gaskin, D.E., 1971, *N.Z. J. Mar. freshw. Res.,* vol. 5: 318–325.
Kasuya, T., 1971, *Sci. Rep. Whale Res. Inst. Tokyo* (23): 129–137.
Moore, J.C., 1972, *Fieldiana Zool.,* vol. 62: 1–19;
Nishiwaki, M. and others, 1972, *Sci. Rep. Whale Res. Inst. Tokyo* (24): 43–56.
Praderi, R., 1972, *Commun. zool. Mus. Hist. nat. Montevideo,* vol. 10(237): 1–7.
Robson, E.D. & van Bree, P.J.H., 1972, *Tuatara,* vol. 19: 101–102.
Massey, C.I., 1973, *Naturalist* (Leeds) (925): 28.
Mörzer Bruyns, W.E.J., 1973, *Saügertierk. Mitt.,* vol. 21: 75–77.
Robineau, D., 1973, *Mammalia,* vol. 37: 504–513.

It would be possible to add about another 50 relevant references published in the last 50 years.

6. Substitution of *Nodus* Wagler, 1830, for *Mesoplodon* Gervais, 1850, would upset long-standing nomenclatural stability and universality. The names of their type species are universally accepted as synonyms of one another and in this well known group of whales there is no possibility of the senior name ever being required for use. It is therefore more straightforward to ask for the suppression of the senior name rather than ask that *Mesoplodon* be granted nomenclatural precedence.

7. The International Commission on Zoological Nomenclature is therefore requested:

(1) to use its plenary powers to suppress the name *Nodus* Wagler, 1830, for the purposes of the Law of Priority but not for those of the Law of Homonymy;

(2) to place on the Official List of Generic Names in Zoology:
  (a) *Mesoplodon* Gervais, 1850 (gender: masculine), type species by original designation, *Delphinus sowerbensis* Blainville, 1817;

(3) to place on the Official List of Specific Names in Zoology:
  (a) *bidens* Sowerby, 1804, as published in the binomen *Physeter bidens* (valid specific name of the type species of *Mesoplodon* Gervais, 1850);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology:
  (a) *Nodus* Wagler, 1830, as suppressed by use of the plenary powers in (1) above;
  (b) *Micropteron* Eschricht, 1849, an incorrect subsequent spelling of *Micropterus* Wagner, 1846;
  (c) *Mikropteron* Eschricht, 1849, an incorrect subsequent spelling of *Micropterus* Wagner, 1846.

PRODORYLAIMUS ANDRASSY, 1959 (NEMATODA): PROPOSED DESIGNATION OF A TYPE SPECIES UNDER THE PLENARY POWERS. Z.N.(S)2129

By P.A.A. Loof (*Landbouwhogeschool, 6700 ES Wageningen, Netherlands*)

In 1959 Andrássy (*Acta zool. Acad. Sci. Hungaricae* vol. 5: 196) erected the new genus *Prodorylaimus,* designating as type species *Dorylaimus longicaudatus* Bütschli, 1874, and giving a key to the four originally included species.

2. The description of *D. longicaudatus* by Bütschli, 1874 (*Abh. Senckenb. naturforsch. Ges.* vol. 9: 256) is very insufficient. He says: 'I only want to mention this species as I cannot describe it exactly' (See Appendix). The type locality was not indicated. The material consisted of a few juvenile specimens, of which some dimensions were given, the most notable of which was the tail length, 0.78 mm. No dorylaim is known in which the juvenile stages have such a long tail. As *D. longicaudatus* was found in garden soil with *D.* (now *Paralongidorus*) *maximus,* it may be inferred that the type locality is somewhere in southern Germany. Examination of ten soil samples from this region – and from localities where *P. maximus* occurs – did not yield any dorylaim conforming to Bütschli's description. The further morphology of *D. longicaudatus* was said not to differ from that of other *Dorylaimus* species. At that time, however, the genus *Dorylaimus* contained species now placed in several families of the Order Dorylaimida: DORYLAIMIDAE, APORCELAIMIDAE, ACTINOLAIMIDAE, NYGOLAIMIDAE, DISCOLAIMIDAE, LONGIDORIDAE and BELONDIRIDAE. Long-tailed species occur in quite a number of genera of these families: *Prodorylaimus, Mesodorylaimus, Dorylaimus, Laimydorus, Paradorylaimus, Ischiodorylaimus, Oxydirus, Xiphinema, Actinolaimus* and others. Thus *D. longicaudatus* is a *species dubia* verging on the status of a *nomen nudum.* It is uncertain to which of the families named above it belongs. The type specimens are not preserved.

3. It would be possible to fix the meaning of *D. longicaudatus* by means of a neotype: after all, many species of the older authors were described insufficiently and no types are preserved. To treat all such names as *nomina dubia* would cause great nomenclatural and taxonomic confusion. However, whereas in many such cases a neotype can be designated from topotypes, that is impossible in the

case under consideration because the type locality is not known. In many cases, also, there is a tradition that can be maintained if there are no strong reasons against it, but in the present case there are such reasons, and the tradition should be maintained.

4. In 1876 (*Tijdschr. ned. dierkd. Ver.* vol. 2: 78-196), 1880 (*ibid.* vol. 5: 1–104) and 1884 (*Die frei in den reinen Erde und im süssen Wasser lebenden Nematoden der niederländischen Fauna,* Leiden, Brill, 206 pp.), de Man described, under the name *D. longicaudatus* Bütschli, a nematode species from the Netherlands. Subsequently the name appeared regularly in the literature and was evidently used in de Man's sense – this is the tradition referred in the preceding paragraph. The few measurements given by Bütschli are against the supposition that this tradition is correct; his specimens were at most larvae of the third stage (witness his remark on the gonad primordium); they had a body length of 2.9 mm and a tail length of 0.78 mm. *D. longicaudatus* sensu de Man is, when adult (i.e. two stages later) 2.5–3.6 mm long and has a tail of 0.4–0.6 mm. It is utterly improbable that the adult female should be no longer than the third-stage larva and have a much shorter tail. If 'proof' is too strong a word, this is a strong reason against the conspecificity of *D. longicaudatus* Bütschli and *D. longicaudatus* auctorum. The latter must evidently be renamed. A subjective junior synonym is available: *Prodorylaimus longicaudatoides* Altherr, 1968, *Limnologica* (Berlin) vol. 6: 270–272.

5. In Andrássy's key mentioned in the first paragraph, some measurements were given for *P. longicaudatus* which show that his concept of the species was different from both Bütschli's and de Man's. The true identity of Andrássy's *P. longicaudatus* is uncertain; probably it is a composite compiled from several literature data. In 1969, however (*Opusc. zool. Inst. Zoosyst. Univ. Budapest* vol. 9 (2): 189), Andrássy gave a reference to de Man, 1876 and 1884 and (: 190–192) redescribed *P. longicaudatus;* his description clearly shows that he is dealing with *P. longicaudatoides.*

6. It is thus certain that the genus *Prodorylaimus* was based upon a misidentified type species, so that the matter must be laid before the Commission. There are three possibilities:

(a) following Art. 70a(iii), *D. longicaudatus* Bütschli, 1874 is designated as type species. This is undesirable because it would make *Prodorylaimus* a *genus dubium* and would result in great nomenclatural instability;

(b) following Art. 70a(i), *D. longicaudatus* sensu Andrássy, 1959 is designated as type species. This is also undesirable because the identity of this species is uncertain and

it has no name of its own.

(c) following Art. 70a(ii), *D. longicaudatus* in the sense in which it has been used since 1876, i.e. *P. longicaudatoides*, is designated as type species. As good descriptions of this species exist and its identity is unambiguous, this seems the best solution.

7. The International Commission on Zoological Nomenclature is accordingly requested:

(1) to use its plenary powers to set aside all designations of type species hitherto made for the nominal genus *Prodorylaimus* Andrássy, 1959 and, having done so, to designate *Prodorylaimus longicaudatoides* Altherr, 1968 as type species of that genus;

(2) to place the generic name *Prodorylaimus* Andrássy, 1959 (gender: masculine), type species by designation under the plenary powers in (1) above, *Prodorylaimus longicaudatoides* Altherr, 1968, on the Official List of Generic Names in Zoology;

(3) to place the specific name *longicaudatoides* Altherr, 1968, as published in the binomen *Prodorylaimus longicaudatoides* (specific name of type species of *Prodorylaimus* Andrássy, 1959) on the Official List of Specific Names in Zoology.

APPENDIX

Original description of *Dorylaimus longicaudatus* Bütschli, 1874.

'Auf diese Art erlaube ich mir hier nur hinzuweisen, da ich nicht im Stande bin, dieselbe in ihren Eigenthümlichkeiten genau zu beschreiben. Sie zeichnet sich durch die bedeutende Länge ihres haarfein auslaufenden Schwanzes aus. Da ich jedoch von ihr nur unreife Thiere sah, so bin ich über ihre Gesämmtlänge ungewiss, jedoch scheint dieselbe nich unbeträchtlich zu sein, da ein Thier von 2.9 mm noch keine weitere Entwicklung seiner bohnenförmigen Geschlechtsanlage zeigte. Die Länge des Schwanzes betrug bei demselben 0.78 mm (1/3 – 1/4 der Körperlänge). Der Oesophagus mass 1/5 der Körperlänge. Die übrigen Charaktere waren sämmtlich wenig verschieden von denen der übrigen Arten dieser Gattung. Das Thier fand sich mit der vorhergehenden Art in derselben Gartenerde.'

(Note: 'die vohergehende Art' is *Dorylaimus* (now *Paralongidorus*) *maximus).*

PEGGICHISME KIRKALDY, 1904 (HEMIPTERA HETEROPTERA: LYGAEIDAE): PROPOSAL TO DESIGNATE A TYPE SPECIES BY THE USE OF THE PLENARY POWERS. Z.N.(S.) 2197

By Merrill H. Sweet (*Departments of Biology and Entomology, Texas A & M University, College Station, Texas 77843*)

Peggichisme was proposed by Kirkaldy, 1904 (*Entomologist* vol. 37: 280) as a new replacement name for *Davila* Distant, 1893 (*Biol. cent.-Amer.* Heteroptera vol. 1, Suppl.: 394), which was preoccupied by *Davila* Gray, 1853, for a genus of bivalved molluscs. In the original publication Distant described three new species in *Davila, D. consanguineus, D. concavus* and *D. pallescens* (it is not clear why he gave the first two names masculine terminations), and these were the only originally included species. As was the practice at the time, neither Distant nor Kirkaldy designated a type species for the genus in question. The choice of type species becomes important because of the question of the synonymy of *Peggichisme* Kirkaldy, 1904, with *Ozophora* Uhler, 1871 (*Proc. Boston Soc. nat. Hist.:* 102). It is the thesis of the present application that the designations of *Davila concavus* Distant, 1893 (*op. cit.:* 395–396) as type species of *Peggichisme* by Van Duzee, 1916, (*List Hemiptera N. Amer.:* 22) and Sweet, 1967 (*Ann. entomol. Soc. Amer.* Vol. 6: 223) were both in error since the designations in each case were based on specimens of *Davila consanguineus* Distant, 1893 (*op. cit.:* 395), misidentified as *Ozophora concava* (Distant, 1893).

2. Both Slater (1964, *Cat. Lygaeidae World:* 1048) and Van Duzee, 1917 (*Cat. Hemiptera N. Amer.:* 188) attributed the synonymising of *Davila* Distant with *Ozophora* Uhler to Barber (1918, *J. New York entomol. Soc.* vol. 26: 53), though Barber had merely noted that Uhler, 1894, had placed *Davila* as a synonym of *Ozophora.* Actually Uhler, 1894 (*Proc. zool. Soc. London* for 1894: 186) only said that *Davila consanguineus* Distant was congeneric, if not conspecific, with *Ozophora burmeisteri* (Guérin), which is a specific, not a generic synonymy. Therefore the formal synonymising of *Peggichisme* Kirkaldy, 1904 with *Ozophora* Uhler, 1871, should be attributed to Van Duzee, 1916.

3. Van Duzee, 1916 (*List Hemiptera N. Amer.:* 22) also synonymised *Peggichisme consanguineus* (Distant) with *Ozophora picturata* Uhler, 1871 (the type species, by monotypy, of *Ozophora*), an action clearly resulting from specimens of *O. picturata* and other closely related species being misidentified as *Ozophora consanguinea* by Uhler (Blatchley, 1926) and Van Duzee himself, as evidenced by determination labels in several collections. Sweet,

1967, raised *consanguineus* Distant from synonymy with *O. picturata*, placed it together with *concavus* Distant in *Peggichisme* Kirkaldy, 1904, and left *pallescens* Distant, 1893, in *Ozophora* Uhler, 1871.

4. It should be understood that the species of the OZOPHORINI of the New World are very similar in superficial coloration and appearance, and would be especially difficult to recognise from the illustrations in the *Biologia centrali-Americana.* I have been able to study the type series of Distant's species of *Davila* in the light of Scudder's 1967 lectotype designations and find, as Scudder noted (1967, *Bull. brit. Mus. (nat. Hist.)* Entomol., vol. 20 (6): 267) that the syntypes of *concava* include representatives of four species. This makes the confusion about the identity of *concava* understandable. Most of the specimens in museums that had been identified as *O. concava* (Distant) by Barber and previous authors, including Van Duzee, were actually specimens of *O. consanguinea* (Distant), as were the specimens I examined when I elevated *Peggichisme.*

5. This is, therefore, clearly a case of a misidentified type species. Specimens of *D. consanguineus* Distant were not present in the syntype series of *D. concavus* Distant. Scudder, 1967, also recognised the specific distinctness of *D. consanguineus.* It is therefore my considered judgement, based on specimens of or near *O. picturata* Uhler being misidentified as *Davila consanguineus* Distant by Uhler, Van Duzee and Barber, and specimens of *Peggichisme consanguinea* (Distant) being similarly misidentified as *O. concava* (Distant), that when Van Duzee selected *Davila concavus* Distant, 1893, as the type species of *Peggichisme,* he actually had in mind or before him specimens of *D. consanguineus* Distant, 1893, unfortunately misidentified as *D. concavus.* Furthermore, Van Duzee probably would not in any case have selected *D. consanguineus* as type species because he erroneously considered that quite distinct species as synonymous with *Ozophora picturata* Uhler.

6. Accepting *Peggichisme* [= *Davila*] *consanguinea* (Distant, 1893) as the correct name for the specimens misidentified as *Ozophora concava* (Distant, 1893) would clear the way for a change in the type species designation that would conserve the name *Peggichisme* and avoid the need to propose a new generic name. *Peggichisme* Kirkaldy would then become the generic name for the neotropical species assemblage distinguished from *Ozophora* Uhler by its sharp, narrowly explanate lateral pronotal margins, notched humeral pronotal angles, and broad, relatively declivant head with large eyes. Also by such action, *Ozophora concava* (Distant, 1893), as a close relative of *O. picturata* Uhler, 1871, would simply remain in the genus *Ozophora* Uhler, 1891.

7. I accordingly ask the International Commission on Zoological Nomenclature:

(1) to use its plenary powers to set aside all designations of type species hitherto made for the nominal genus *Peggichisme* Kirkaldy, 1904, and, having done so, to designate *Davila consanguineus* [*sic*] Distant, 1893, as type species of that genus;

(2) to place the generic name *Peggichisme* Kirkaldy, 1904 (gender: feminine), type species, by designation under the plenary powers in (1) above, *Davila consanguineus* [*sic*] Distant, 1893, on the Official List of Generic Names in Zoology;

(3) to place the specific name *consanguineus* Distant, 1893, as published in the binomen *Davila consanguineus* [*sic*] (specific name of type species of *Peggichisme* Kirkaldy, 1904, on the Official List of Specific Names in Zoology.

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LYMANTRIIDAE HAMPSON [1893] (INSECTA, LEPIDOPTERA) PROPOSED PRECEDENCE OVER ORGYIIDAE WALLENGREN, 1861, AND DASYCHIRIDAE PACKARD, 1864. Z.N.(S) 2216

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The purpose of this application is to ask the Commission to use its plenary powers to give precedence to the family-group name LYMANTRIIDAE Hampson, [1893], over ORGYIIDAE Wallengren, 1861 and DASYCHIRIDAE Packard, 1864.

2. This family of moths consists of about 2,500 species and is world-wide in distribution. Several species are serious forest and orchard pests, notably the now holarctic Gypsy Moth, *Lymantria dispar* (Linnaeus); the Douglas-fir Tussock Moth, *Orgyia pseudotsugata* (McDunnough), sometimes regarded as the most important forest pest in the United States; and the Brown-tail Moth, *Euproctis chrysorrhoea* (Linnaeus), which occurs in much of Europe and in the New England States of the U.S.A.; other species of *Euproctis* Hübner, [1819], defoliate castor, coffee and conifers in India and southern Africa. Several species, notably those of the genus *Euproctis,* are of medical interest, having barbed hairs which cause urticaria in man and can also cause eye injury by penetrating the cornea. The usage of the family-group name is therefore widespread throughout the world, both in technical and popular works.

3. The family was first separated under the name LARIIDAE, originally proposed as LARIAE by Newman (1832: 40, 44) and based on the genus *Laria* Schrank (1802: 150), a junior homonym of *Laria* Scopoli, 1763 – Insecta, Coleoptera. The next name established for this family was LIPARIDAE, originally proposed as LIPARIDES Boisduval (1834: 134), based on the genus *Liparis* Ochsenheimer (1810: 186), a junior homonym of *Liparis* Scopoli, 1777 – Pisces. Neither of these family-group names may be used as a valid name, the name of the type-genus in each case being a junior homonym.

4. The following names have also been established for the family:

(a) ORGYIIDAE, originally proposed as ORGYIDES, was established by Wallengren (1861: 369), based on the

genus *Orgyia* Ochsenheimer (1810: 208), type species, by subsequent designation by Curtis (1831: 378), *Phalaena antiqua* Linnaeus (1758: 503). This is the oldest valid name for the family.

(b) DASYCHIRIDAE, originally proposed as DASYCHIRAE, was established by Packard (1864: 331), based on the genus *Dasychira* Hübner ([1809]: pl. [178]), type species by monotypy, *Dasychira tephra* Hübner ([1809]: pl. [178]).

(c) LYMANTRIIDAE was established by Hampson ([1893]: 432), based on the genus *Lymantria* Hübner ([1819]: 160), type species, by subsequent designation by Moore ([1883]: 99), *Phalaena monacha* Linnaeus (1758: 501).

(d) LEUCOMIDAE was established by Grote (1895: 3), based on the genus *Leucoma* Hübner (1822: 14, 19), type species, by subsequent designation by Westwood (1840: 92), *Phalaena salicis* Linnaeus (1758: 502).

(e) OCNERIIDAE, originally proposed as OCNERIADAE, was established by Meyrick (1895: 169), based on the genus *Ocneria* Hübner ([1819]: 158), type species, by subsequent designation by Kirby (1892: 466), *Bombyx rubea* [Denis & Schiffermüller] (1775: 51).

(f) HYPOGYMNIDAE was established by Grote (1896: 3), based on the genus *Hypogymna* Billberg (1820: 84), type species, by subsequent designation by Curtis (1839: 767), *Phalaena monacha* Linnaeus (1758: 501).

5. Of the family-group names listed in paragraphs 3 and 4, LIPARIDAE was the most widely used during the nineteenth century; ORGYIIDAE and DASYCHIRIDAE had minor usage, but neither name has been widely adopted. During the present century ORGYIIDAE was used in an important revisionary work by Kozhantchikov (1950); it was used again by Pantyukhov (1964: 94), but he reverted three years later (1967: 40) to the use of the better-known, but invalid name LIPARIDAE; it was also used by Minyailo & Minyailo (1972: 1247). The name LYMANTRIIDAE has been used many hundreds of times throughout the world during the present century, in taxonomic and faunistic works, in economic literature, in textbooks and check lists. A brief, random survey of the twentieth century literature on the shelves of the Lepidoptera Section of the British Museum (Natural History) scored the following usages: ORGYIIDAE 3, LIPARIDAE 6, LYMANTRIIDAE

108. In 1970–1975, *Abstracts of Entomology* volumes 1–6, there are 35 references to LYMANTRIIDAE, two to LIPARIDAE, one to ORGYIIDAE and none to any other of the family-group names included in paragraphs 3 and 4. To comply with Article 79 of the Code, a selection of the more important references, in which those that use LYMANTRIIDAE are marked with an asterisk, is given at the end of this paper.

6. The continued use of the name LIPARIDAE has been mainly in North American publications, but as the use of this name must be abandoned because of the homonymy of its type-genus, it is important that the replacement name adopted should be that in general use throughout the rest of the world. The evidence of the world-wide use of the family-group name LYMANTRIIDAE is overwhelming, and the interests of nomenclatural stability will best be served by its conservation.

7. The Commission is accordingly asked:

(1) to use its plenary powers to rule that the family-group name LYMANTRIIDAE Hampson, [1893], is to be given nomenclatural precedence over the family-group names ORGYIIDAE Wallengren, 1861, and DASYCHIRIDAE Packard, 1864, when applied to the same biological taxon, at any level in the family group;

(2) to place the following names on the Official List of Family-Group Names in Zoology:

(a) LYMANTRIIDAE Hampson, [1893] (type-genus *Lymantria* Hübner, [1819]) with an endorsement that, as ruled in (1) above, it is to be given precedence over ORGYIIDAE Wallengren, 1861, and over DASYCHIRIDAE Packard, 1864, when applied to the same biological taxon, at any level in the family group;

(b) ORGYIIDAE Wallengren, 1861 (type genus *Orgyia* Ochsenheimer, 1810) with an endorsement that, as ruled in (1) above, it is not to be used in place of LYMANTRIIDAE Hampson, [1893], when applied to the same biological taxon, at any level in the family group;

(c) DASYCHIRIDAE Packard, 1864 (type genus *Dasychira* Hübner, [1809]) with an endorsement that, as ruled in (1) above, it is not to be used in place of LYMANTRIIDAE Hampson, [1893],

when applied to the same biological taxon, at any level in the family group;

(3) to place the following names on the Official List of Generic Names in Zoology:

(a) *Lymantria* Hübner, [1819] (the name of the type genus of the family LYMANTRIIDAE Hampson, [1893]) (gender: feminine), type species, by subsequent designation by Moore, [1883], *Phalaena monacha* Linnaeus, 1758;

(b) *Orgyia* Ochsenheimer, 1810 (the name of the type genus of the family ORGYIIDAE Wallengren, 1861) (gender: feminine), type species, by subsequent designation by Curtis, 1831, *Phalaena antiqua* Linnaeus, 1758;

(c) *Dasychira* Hübner, [1809] (the name of the type genus of the family DASYCHIRIDAE Packard, 1864) (gender: feminine), type species, by monotypy, *Dasychira tephra* Hübner, [1809];

(4) to place the following names on the Official List of Specific Names in Zoology:

(a) *monacha* Linnaeus, 1758, as published in the combination *Phalaena (Bombyx) monacha* (specific name of the type species of *Lymantria* Hübner, [1819]);

(b) *antiqua* Linnaeus, 1758, as published in the combination *Phalaena (Bombyx) antiqua* (specific name of the type species of *Orgyia* Ochsenheimer, 1810);

(c) *tephra* Hübner, [1809], as published in the binomen *Dasychira tephra* Hübner, (specific name of the type species of *Dasychira* Hübner, [1809]);

(5) to place the following names on the Official Index of Rejected and Invalid Family-Group Names in Zoology:

(a) LARIIDAE Newman, 1832, originally proposed as LARIAE (a name based on *Laria* Schrank, 1802, a primary homonym of *Laria* Scopoli, 1763 – Insecta, Coleoptera);

(b) LIPARIDAE Boisduval, 1834, originally proposed

as LIPARIDES (a name based on *Liparis* Ochsenheimer, 1810, a primary homonym of *Liparis* Scopoli, 1777 – Pisces).

(6) to place the following names on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Laria* Schrank, 1802, a primary homonym of *Laria* Scopoli, 1763;

(b) *Liparis* Ochsenheimer, 1810, a primary homonym of *Liparis* Scopoli, 1777.

8. This application is also supported by Dr. L. Vári (*Transvaal Museum, Paul Kruger Street, Pretoria, South Africa)*, and by Dr. P. Viette (*Muséum National d'Histoire Naturelle, 45 Rue de Buffon, Paris, France).*

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LYMANTRIIDAE HAMPSON, [1893] (INSECTA, LEPIDOPTERA): COMMENTS ON PROPOSED PRECEDENCE OVER ORGYIIDAE WALLENGREN, 1861, AND DASYCHIRIDAE PACKARD, 1864. Z.N.(S) 2216

(1) By I.F.B. Common (*Division of Entomology, C.S.I.R.O., Canberra, Australia*)

I support wholeheartedly the application by Fletcher, Nye and Ferguson for the Commission to exercise its plenary powers to give nomenclatural precedence to the family-group name LYMANTRIIDAE Hampson, [1893] over the family-group names ORGYIIDAE Wallengren, 1861 and DASYCHIRIDAE Packard, 1864. They have presented a compelling and well documented case for this proposal.

To their impressive list of references, in which the name LYMANTRIIDAE has been used, could be added the *Zoological Record* in which the name has been used consistently since 1924. Previously in this journal members of the family were included in the BOMBYCIDAE (1864-68), in the LIPARIDAE

(1869–91 and 1922–23), and in the Bombyces *s.l.* (1892–1921). In Australian entomological literature the name LIPARIDAE was widely used until 1924 (e.g. Turner, 1920), when Turner began using the name LYMANTRIADAE [*sic*], having been informed that the generic name *Liparis* Ochsenheimer, 1810 was a homonym of *Liparis* Scopoli, 1777 (Turner, 1924). Since then the name LYMANTRIIDAE has been used consistently in the Australian literature, including Tillyard (1926), McKeown (1942), Turner (1946) and Common (1970). Entomologists in Australia would therefore welcome action by the Commission in granting the proposed conservation of this family-group name.

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(2) By U. Dall'Asta (*Musée Royal de l'Afrique Centrale, Tervuren, Belgium)*

For over fifty years all authors dealing with African representatives of this family have used the family-group name LYMANTRIIDAE, therefore I wholly support the proposal that this name should have precedence over ORGYIIDAE Wallengren, 1861, and DASYCHIRIDAE Packard, 1864.

(3) By G. Ebert (*Landessammlungen für Naturkunde, D 75 Karlsruhe 1, Erbprinzenstrasse 13, B.R.D.)*

In the interests of a desirable progress towards stability in nomenclature, the name LYMANTRIIDAE Hampson, [1893], almost universally used in twentieth century applied and special literature, should in future have precedence over the earlier but little used names ORGYIIDAE Wallengren, 1861, and DASYCHIRIDAE Packard, 1864.

(4) By H. Inoue (*Biological Laboratory, Otsuma Woman's University, Tokyo, Japan)*

It is my great pleasure to support the proposal from the viewpoint of

popularity of the name LYMANTRIIDAE in Japan, both by professional and amateur entomologists. In our country in most influential publications, such as *Check List of the Lepidoptera of Japan* vol. 4 (1956), *Icones Heterocerorum Japonicorum in Coloribus Naturalibus* vol. 1 (1957) and vol. 2 (1959), *Iconographia Insectorum Japonicorum Colore Naturali Edita* (1959), *Early Stages of Japanese Moths in Colour* vol. 1 (1965), the family name LYMANTRIIDAE is accepted. At present LYMANTRIIDAE is used by systematic, agricultural, forestry and medical entomologists in our country with no exception. Change of the family name to LIPARIDAE, ORGYIIDAE, or others would be undesirable from the practical viewpoint.

Therefore, I believe that the action for conservation and stabilization of the family name LYMANTRIIDAE is a timely one for the development of entomology.

(5) By E.C.G. Pinhey (*National Museum, Bulawayo, Rhodesia*)

This family contains some species of economic significance in many countries through damage inflicted by the larvae on timber and shade trees, and sometimes to orchards; for this reason alone it is important to have the family-group name stabilised. The overwhelming usage of the name LYMANTRIIDAE in preference to the alternatives is readily seen from the literature on the family over the years since 1893 when Hampson established this name. I should welcome action by the Commission to conserve this family-group name.

(6) By J.C.E. Riotte (*Bernice P. Bishop Museum, P.O. Box 6037, Honolulu, Hawaii 96818*)

I have read carefully the application submitted by Fletcher, Nye and Ferguson and having myself published a number of papers concerning species of the family LYMANTRIIDAE, I should like to fully support their application.

Taking into consideration that lepidopterists have tried for quite a considerable time to rid the literature of the preoccupied name LIPARIDAE (which, however, is still used by some workers), one can imagine the confusion that would result if strict priority were applied in this case.

As has been rightly pointed out by the applicants, the name LYMANTRIIDAE is widespread throughout the world, not only in taxonomic literature, but also in many medical and popular publications. To change the name of this family would serve no useful purpose, except to satisfy a narrow juridical view, which in this case should be put to rest once and for all.

HARMINIUS FAIRMAIRE, 1852 (COLEOPTERA); PROPOSED DESIGNATION OF A TYPE SPECIES UNDER THE PLENARY POWERS. Z.N.(S)2264

By Edward C. Becker (*Biosystematics Research Institute, Agriculture Canada, Ottawa, Canada K1H 0C6*)

The purpose of this paper is to preserve the generic name *Harminius* Fairmaire, 1852, in the sense in which it has generally been used since 1875 (Bonvouloir, *Ann. Soc. ent. France* (4) vol. suppl., 907 pp.). Fairmaire, 1852 *Ann. Soc. ent. France* (2), vol. 80–81) described the new genus *Harminius* with the new species *H. castaneus* from Sicily as the type species by monotypy. He placed the genus in the EUCNEMIDAE, but all subsequent authors since Bonvouloir have placed it in the ELATERIDAE.

2. Fairmaire's type material appears to be lost. Miss C.M.F. von Hayek (*British Museum (Natural History), London*) tells me that she cannot find it in the Fairmaire, Candèze, Fleutiaux and Oberthür collections at the Muséum National d'Histoire Naturelle in Paris, or in the Candèze collection at the Institut Royal des Sciences Naturelles in Brussels. *H. castaneus* can thus only properly be treated as a species *incertae sedis,* since Fairmaire's original description and figure do not show whether he was describing an eucnemid or an elaterid.

3. The species from southern Italy and Sicily that is commonly called *Harminius castaneus* (commonly with *Athous spiniger* Candèze, 1860, *Mem. Soc. r. Sci. Liége,* vol. 15: 460–461 as a synonym) is very distinctive and cannot be confused with any other species except *Athous florentinus* Desbrochers, 1870 (*l'Abeille,* vol. 7: 114) from northern Italy. Neither of these bears any resemblance to the original description of *H. castaneus* Fairmaire, a beetle with a parellel-sided prothorax and a rounded head. I know of no species of *Athous* or related genera with these characters (see Becker, 1978, *Canadian Entomol.* vol. 111 (5): 561–568 for more details).

4. Fiori, 1898, *Atti Soc. Nat. Modena* (3) vol. 16: 162, either overlooked or ignored Fairmaire's *Harminius* when he described *Pseudocorymbites* as a subgenus of *Athous.* He included only one valid species, *'Athous castaneus* Fair.', with *A. spiniger* Candèze, 1860, as a subspecies and *A. florentinus* Desbrochers, 1870 as a synonym of *A. spiniger.* Even though Fiori (and other

authors) misidentified *Harminius castaneus, Pseudocorymbites* is still a synonym of *Harminius* because both have the same type species (Articles 67j and 70).

5. I suggest that *Athous spiniger* Candèze be designated as the type species of *Harminius* and *Pseudocorymbites* rather than *Harminius castaneus* for the following reasons:

(a) the type of *castaneus* cannot be located, but it cannot in any case belong to the species commonly called by this name;

(b) the syntypes of *spiniger* are available and leave no doubt as to the identity of the species;

(c) the name *Harminius* has been used for a subgenus of *Athous* or for a genus consistently for over 100 years for *castaneus* auctorum (*non* Fairmaire), *spiniger, florentinus,* etc.;

(d) if the types of *Harminius castaneus* are located, then a new generic name will be needed for *spiniger* and its allies.

6. In order to provide maximum stability of nomenclature, the International Commission on Zoological Nomenclature is hereby requested

(1) to use its plenary powers to set aside all designations of type species hitherto made for the nominal genera *Harminius* Fairmaire, 1852, and *Pseudocorymbites* Fiori, 1898, and to designate *Athous spiniger* Candèze, 1860 as type species of both genera;

(2) to place the generic name *Harminius* Fairmaire, 1852 (gender: masculine), type species, by designation under the plenary powers in (1) above, *Athous spiniger* Candèze, 1860, on the Official List of Generic Names in Zoology;

(3) to place the specific name *spiniger* Candèze, 1860, as published in the binomen *Athous spiniger* (specific name of type species of *Harminius* Fairmaire, 1852 and *Pseudocorymbites* Fiori, 1898) on the Official List of Specific Names in Zoology;

(4) to place the generic name *Pseudocorymbites* Fiori, 1898 (a junior objective synonym of *Harminius* Fairmaire, 1852 by reason of the ruling under the plenary powers in (1) above) on the Official Index of Rejected and Invalid Generic Names in Zoology.

ACMAEA LIMATULA CARPENTER, 1864 (MOLLUSCA, GASTROPODA): PROPOSED CONSERVATION BY USE OF THE PLENARY POWERS. Z.N.(S.) 2268

By David R. Lindberg *(Department of Invertebrate Zoology, California Academy of Sciences, San Francisco, California 94118, U.S.A.)*

The purpose of this application is to request suppression of a species-group name which has not been applied to the appropriate species for over 110 years, and which as a senior synonym would replace a well established name. Since its original description, the only citation of the name has been as a junior synonym. Although this name was a secondary homonym for approximately 100 years, this issue was not addressed by workers; the two species are no longer considered congeneric. Application is here made to the Commission to suppress the specific name as a senior synonym unused except as a junior synonym. The facts of the case are as follows:–

2. Rathke, 1833 (*Zool. Atlas* .... Part 5. Berlin: 18), established *Acmaea mammillata.* This species-group name was recognized by workers Philippi, 1846 (*Z. f. Malacol.:* 107), Carpenter, 1857 (*Rep. br. Assoc. Adv. Sci.* vol. 1856: 173) and Dall, 1871 (*Am. J. Conchol.* vol. 6: 241), as a junior synonym of *Acmaea mitra* Rathke, 1833.

3. Reeve, 1855 (*Conch. Icon.* vol. 8: Species 119 and 140), established the names *Patella scabra* and *Patella mamillata* for another acmaeid species (both names applying to the same species). Because of page priority *Patella scabra* was accepted in general usage and *Patella mamillata* was considered a junior synonym of the former (Carpenter, 1864, *Rept. br. Assoc. Adv. Sci.* for 1863: 527; 1866, *Am. J. Conchol.* vol. 2: 345). Dall, 1914 (*Nautilus* vol. 28: 14), pointed out that *Patella scabra* Gould, 1846, was the valid name for the acmaeid species which had been previously known as *spectrum* Reeve, 1855, and that primary homonymy existed between *Patella scabra* Reeve, 1855, and *Patella scabra* Gould, 1846. Dall rejected the junior name, *Patella scabra* Reeve, and replaced it with what he believed to be the earliest synonym, *Acmaea limatula* Carpenter, 1864 (*Rep. br. Assoc. Adv. Sci.* for 1863: 650). However, the earliest available name for this taxon is *Patella mamillata* Reeve, which at that point should have been rejected as a junior secondary homonym (*Acmaea mammillata* Rathke, 1833, vs. *Acmaea mamillata* (Reeve, 1855) under the Code, Article 59b). Dall did not discuss this name and there is no indication that he was aware of its existence or significance. *Acmaea*

mammillata Rathke and *Acmaea limatula* Carpenter are no longer considered to be congeneric. The latter has been rightfully transferred to the genus *Collisella* Dall, 1871 by McLean, 1969 (*Los Angeles Co. Mus. Natl. Hist., Sci. Ser.* vol. 24, Zool. No. 11: 16).

4. The species-group name *Acmaea* (or *Collisella) limatula* enjoys wide acceptance in the molluscan literature. Usage includes: Grant and Gale, 1931 (*Mem. San Diego Soc. Nat. Hist.* vol. 1: 810); Keep and Baily, 1935 (*West Coast Shells,* Stanford: 175); Abbott, 1954 (*Amer. Seashells,* Princeton: 102); Abbott, 1974 (*Amer. Seashells,* New York: 31); McLean, 1978 (*Nat. Hist. Mus. Los Angeles Co., Sci. Ser.* vol. 24: 16); Light & Others, 1954 (*Intertidal Invertebrates of the Central California Coast,* Berkeley: 248); Carlton & Roth, 1975 (Phylum Mollusca: Shelled Gastropods, in R.I. Smith & J.T. Carlton, *Light's Manual,* Berkeley: 480); Ricketts & Calvin, 1968 (*Between Pacific Tides,* Stanford: 46); Test, 1945 (*Ecol.* vol. 26: 397); Test, 1946 (*Univ. Michigan Contrib. Lab. Vert. Biol.* vol. 31: 13). References to the species have also been made in over 35 additional publications.

5. During the 98 years that secondary homonymy existed between *Acmaea mammillata* Rathke, 1833, and *Patella mamillata* Reeve, 1855, the species-group name *mamillata* Reeve was never rejected as a homonym and was also never used as a valid name of a taxon. I submit that this is a *prima facie* case of an unused senior synonym threatening a name in current general usage according to Article 79b and subsections (i) and (ii) (*Bull. Zool. Nom.* vol. 31: 87–88). Therefore the Commission is requested:

(1) to use its plenary powers to suppress the specific name *mamillata* Reeve, 1855, as published in the binomen *Patella mamillata,* for the purposes of the Law of Priority but not those of the Law of Homonymy;

(2) to place the specific name *limatula* Carpenter, 1864, as published in the binomen *Acmaea limatula,* on the Official List of Specific Names in Zoology;

(3) to place the specific name *mamillata* Reeve, 1855, as suppressed under the plenary powers in (1) above, on the Official Index of Rejected and Invalid Specific Names in Zoology.

RAFINESQUE, 1822, "ON THE TURTLES OF THE UNITED STATES" (REPTILIA, TESTUDINES): PROPOSED SUPPRESSION BY USE OF THE PLENARY POWERS. Z.N.(S.) 2289

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In a seldom-noted article appearing in 1822 in a newspaper, Rafinesque listed the names of 12 "new species" of turtles, only one of which *(Monoclida kentukensis)* has ever been cited (apparently first by Schmidt, 1953: 94). As a junior synonym of *Terrapene carolina* (Linnaeus, 1758), that name has posed no problem and is not likely to do so in the future. Nine of the other names are clearly either *nomina dubia* or *nomina nuda*, and therefore are either not identifiable or not nomenclaturally available. The two others, never cited since their first appearance, are nomenclaturally available and sufficiently characterized as to be identifiable. Those two names (*Trionyx nasica* Rafinesque, 1822, and *Trionyx pusilla* Rafinesque, 1822) unfortunately antedate two others that have long been accepted as valid for their species (*Trionyx spiniferus* (LeSueur, 1827) and *Trionyx muticus* (LeSueur, 1827), respectively). As well used names, having been universally accepted in hundreds of works for over 100 years, the latter two names are actually not threatened by Rafinesque's *nomina oblita*, since application of the Law of Priority would obviously "disturb stability or universality or cause confusion" (Art. 23 a–b of the Amended Code) – indeed, it would do all three. The Amended Code requires maintenance of existing usage and referral of the case to the Commission for a decision under the plenary powers.

2. Rafinesque's article is here reproduced in full, with our annotations in brackets.

'For the Kentucky Gazette.

'The Cosmonist – No. XII.

'Within their shells the sluggish Turtles live. They crawl or swim; affording luscious food.

'On the Turtles of the United States.

'The turtles, often called by the Indian name of *Tarapen* in the United States, are a peculiar kind of harmless Reptiles, which afford delicious food, and their shells pretty ornaments.

'Linnaeus only knew eight species of turtles from the

United States, many new species were described by Schuepf [=Schoepff], Rose [=Bosc], Bartram, Lenieur [=LeSueur], etc. and I have myself discovered twelve new species: the total number now known is therefore increased to thirty-five.

'Among these there are six species of Sea Turtles and eight Land Turtles. All the others are amphibious, living commonly in the freshwater, but often creeping on land.

'I have called as follows my new species:

1. *Trionyx nasica,* Long-nose soft-shell Turtle.
2. *Trionyx pusilla,* Dwarf soft-shell Turtle.
3. *Emyda pugnax,* Fighting Tarapen.
4. *Emyda morstans,* Biting Tarapen.
5. *Emyda megalonyx,* Long-claw Tarapen.
6. *Emyda Striata,* Striped Tarapen.
7. *Emyda Semiradiata,* Radiating Tarapen.
8. *Emyda nodosa,* Knobby Tarapen.
9. *Emyda granularis,* Granulated Tarapen.
10. *Monoclida Kentukensis,* Kentucky Box Turtle.
11. *Lepidemy* [sic] *bifida,* Bifid Tarapen.
12. *Didicla erythrops,* Red-eye Tarapen.

'I wrote in 1819 a Monography of these, and remarks on all the Turtles of the U. States, which was sent to the American Journal of Science, but not published: it has been since sent to Europe and published there. [If so it is unknown; we doubt the statement.]

'The most important of these Turtles is the Long-nose Great Soft Shell, so common all over the western streams, and which reaches sometimes the weight of fifty pounds. It had been blended [i.e., confused] with the ferocious Turtle of the Southern States *(Tertudo* [sic] *ferox)* from which it is quite different. I was the first to ascertain that it belongs to the genus *Trionyx* of Geoffroy, to describe it and draw it correctly.

'I will conclude by describing one of my new [column 4] species No. 10, found in Kentucky and called the Kentucky Box Turtle. It belongs to the genus *Monoclida* or Turtle with lower shell shutting like a box. It has some affinity with the Carolina Box Turtle, but is yet very different.

'Upper shell 6 inches long, 4 broad, and 2 high; almost elliptical, very convex, deeply notched in front, slightly serrated and flattened behind, blackish with some yellow irregular spots. 13 central scales, the first and third with a flat ridge, 25 marginal scales, all the scales slightly striated in concentric waved small wrinkles. Lower shell 5 inches long, 3 broad, elliptical, blachish [sic] entire, concave behind,

shutting before, with 13 smooth scales.

'Head black with yellow dots, neck yellow with black dots, whitish beneath, cheeks flat, jaws horny entire; neck without scales, but flat horny warts.

'Limbs scaly, tail very short, forefeet yellow with black spots, 5 brown claws, toes united. Hind feet brownish above, pale beneath, four claws, toes soldered.

C.S. Rafinesque'.

3. The 'Long-nose Great Soft Shell', *Trionyx nasica* Rafinesque, is clearly *Trionyx spiniferus* (LeSueur, 1827), and the 'Dwarf soft-shell Turtle', *Trionyx pusilla* Rafinesque, is clearly *Trionyx muticus* (LeSueur, 1827). The characterizations, though brief, suffice to make the names available and to identify the species named. *Monoclida kentukensis* Rafinesque is amply characterized to justify acceptance as nomenclaturally available as well as referral to synonymy with *Terrapene carolina carolina* (Linnaeus, 1758). The nine other names are certainly unidentifiable, for the common names applied to them are either ambiguous or unintelligible. However, since the common names do provide some information, however minuscule and useless for identification, their associated scientific names might be construed as *nomina dubia* rather than *nomina nuda*, in which case they would be accepted as nomenclaturally available, although unidentifiable. This conclusion is consistent with acceptance of *Trionyx pusilla* as available, on no more information than common name; the distinction is that the common name for *pusilla* provides a diagnostic character that makes the species identifiable, whereas that is not the case for the others. Yet the amount of information is the same for all, and if one name can be regarded as thereby nomenclaturally available, all should be.

4. The most recent monograph of soft-shelled turtles of North America (Webb, 1962) does not mention either of Rafinesque's names in *Trionyx*, and they are not cited in his later reviews (1973a–d) of the same species. The most recent taxonomic review of the turtles of the world (Wermuth & Mertens, 1977) mentions only *Monoclida kentukensis*. The omission of Rafinesque's names is not a matter of exclusion of *nomina nuda* or *nomina dubia*, since all others known to these authors were cited.

5. Because of the ambiguity of status of all names (except *Monoclida kentukensis*) published in Rafinesque's account, it seems best to request that the entire work be suppressed for nomenclatural purposes. The one unambiguous name is of no conceivable utility in the future, and therefore no exception to preserve it alone is justified. It should, however, be pointed out that *Monoclida* was proposed anew by Rafinesque, 1832: 64, in which work he cited only *Testudo retziana* (*nomen novum* for *Testudo retzii* Daudin,

1802, = *Kinosternon scorpioides scorpioides* (Linnaeus, 1766)) for the genus. As for 1832, therefore, *Monoclida* Rafinesque is an available nominal genus, and a junior synonym of *Kinosternon* Spix, 1824.

6. The ambiguity of status of Rafinesque's 1822 account is not only internal, however; it extends to the context of Art. 8 (2) of the Code, which requires that 'a work when first issued must ..... be issued for the purpose of scientific, public, permanent record ...' The work was certainly a public record, but it was clearly not intended to be permanent, and few would construe it as scientific, though Rafinesque might have done so, since that newspaper, at that time, was noted for its scholarly essays. Few other outlets for such material then existed.

7. All factors considered, the simplest alternative to an otherwise potentially complex, lengthy and unrewarding consideration of the merits, status and identity of each of these 12 names is to declare the entire work unavailable for nomenclatural purposes.

8. We accordingly request the International Commission on Zoological Nomenclature:

(1) to use its plenary powers to suppress for nomenclatural purposes the work by C.S. Rafinesque, 1822 entitled "On the Turtles of the United States" as published in the *Kentucky Gazette* (n.s. 1) vol. 36 (no. 21, May 23): 3 cols. 3–4 and to rule that no name acquires the status of availability by reason of having been published therein;

(2) to place on the Official Index of Rejected and Invalid Works in Zoological Nomenclature the work by Rafinesque, 1822 rejected by use of the plenary powers in (1) above.

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_____ 1973b. *Trionyx ferox. Ibid.,* 138: 1–3, map.

_____ 1973c. *Trionyx muticus. Ibid.,* 139: 1–2, map.

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CHRYSOLINA MOTSCHULSKY, 1860 (INSECTA: COLEOPTERA): PROPOSED CONSERVATION. Z.N.(S) 2291

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In this application it is proposed that the generally used generic name *Chrysolina* Motschulsky, 1860, in the CHRYSOMELIDAE, be granted nomenclatural precedence over its unused senior synonym *Atechna* Chevrolat, 1837.

2. The genus *Chrysomela* was described by Linnaeus, 1758: 368, with a large number of species. Latreille (1810: 432) designated *Chrysomela populi* Linnaeus, 1758: 370, as its type species.

3. The genus *Melasoma* was described by Stephens, 1831: 349. Westwood (1838: 43) designated *Chrysomela populi* Linnaeus, 1758: 370, as its type species. *Melasoma* is accordingly a junior objective synonym of *Chrysomela.*

4. The genus *Atechna* was established by Chevrolat, in Dejean, 1837: 427, to include 19 species, all but one of which were from South Africa. Most of the names included were nomina nuda, but at least the following five were available:

Chrysomela guttata Fabricius, 1792: 313;

Chrysomela quatuordecimguttata Fabricius, 1798: 85;

Chrysomela vulpina Fabricius, 1781: 122;

Chrysomela alternans Fabricius, 1794: 447; and

Chrysomela striata Fabricius, 1781: 122.

Atechna was used again a few years later by Duponchel & Chevrolat (in d'Orbigny, 1842: 282). As far as I know, no type species has been designated.

5. The genus *Polysticta* was described by Hope, 1840: 164, who designated *Chrysomela guttata* Fabricius as its type species. However, *Polysticta* Hope is a junior homonym of *Polysticta* Eyton, 1836 (Aves).

6. Stephens, Chevrolat and others used the name *Chrysomela* for the large genus including, for instance, *Chrysomela goettingensis* Linnaeus, 1761 (*non* Linnaeus, 1758) and *C. graminis* Linnaeus,

1758. Hope (1840) ignored Latreille's designation and cited *C. goettingensis* as the type species. Thomson (1859) also ignored Latreille and designated *C. graminis*. The generic name *Chrysomela* was used for a long time based on *graminis*.

7. Motschulsky (1860) dismembered the genus *Chrysomela* auct. restricting the name *Chrysomela* to a small group of species with *C. graminis* as type. From the old *Chrysomela* auct. he described 23 new genera, one of them being *Chrysolina* Motschulsky, 1860: 210, with *Chrysomela staphylaea* Linnaeus, 1758: 370, as type species. Motschulsky's action was overwhelmingly ignored by his contemporaries, and his names were not even used as subgenera until much later.

8. Maulik (1925) rediscovered Latreille's designation. He then chose *Chrysolina* to be the name for *Chrysomela* auct. According to Maulik the genus *Atechna* comprised the South African species and differed from *Chrysolina*. Later Maulik (1926) used the generic names in the corrected sense.

9. Maulik's discovery did not result in an immediate acceptance. *Chrysomela* in its customary sense was firmly entrenched, but gradually the correct use increased with works by Chen (1934), Van Dyke (1938) and Bechyné (1946). Four years later Bechyné (1950) in his large work on *Chrysolina* brought the matter to general attention, and nowadays *Chrysolina* is widely used, e.g. Kontkanen (1959), Chen (1961), Arnett (1962), Brown (1962), Jolivet (1966), Takizawa (1970), Daccordi & Ruffo (1975), Medvedev & Voronova (1976), Lopatin (1977) and Pope (1977). Nevertheless others have persisted in the incorrect use of *Chrysomela* for this genus. Also Bechyné (1958) suggested that *Chrysolina* should be united with *Oreina* Chevrolat, 1837 (type species *Chrysomela tristis* Fabricius, 1792, designated by Motschulsky, 1860), and Gressitt & Kimoto (1963a) first agreed with that view, but a little later reconsidered and used *Chrysolina* as a separate genus (Gressitt & Kimoto, 1963b)

10. Bechyné (1950) treated *Polysticta* Hope, 1840, as a subgenus of *Chrysolina* Motschulsky, 1860, although *Polysticta* was senior by 20 years. He did not name the species included, but stated that all South African species belonged here. Ferreira (1967) also listed *Polysticta* as a subgenus of *Chrysolina*, but because it was a junior homonym *Polysticta* Hope should not have been used by either author.

11. *Atechna* has not been used in any systematic work as a valid generic name. Nevertheless it is available, and as the five species listed in paragraph 4 were all implicitly included in *Polysticta* by

Bechyné, then *Atechna* should be used as its replacement name. A type species must still be fixed, so I here designate *Chrysomela vulpina* Fabricius, 1781.

12. *Atechna* is senior to *Chrysolina* by 23 years and currently the type species are included in the same genus. Accordingly *Chrysolina* should be reduced to a synonym, and this large genus containing several hundred species, most of them palaearctic, should be known as *Atechna*. The use of the name would, however, be dependent on the status given to the South African group. *Chrysolina* is a well known name in ever increasing use, its only other competition coming from an incorrect use of *Chrysomela*, while *Atechna* has not been used even as a subgeneric name until recently (Daccordi, 1976, 1978). To substitute *Chrysolina* with *Atechna* would not be in the interest of stability.

13. The International Commission on Zoological Nomenclature is therefore requested:

(1) to use its plenary powers to give *Chrysolina* Motschulsky, 1860, nomenclatural precedence over *Atechna* Chevrolat, 1837;

(2) to place on the Official List of Generic Names in Zoology:

(a) *Chrysomela* Linnaeus, 1758 (gender: feminine), type species designated by Latreille (1810: 432), *Chrysomela populi* Linnaeus, 1758;

(b) *Chrysolina* Motschulsky, 1860 (gender: feminine), type species by original designation, *Chrysomela staphylaea* Linnaeus, 1758, with an endorsement that it is to be given precedence over *Atechna* Chevrolat, 1837, whenever the two names are regarded as synonyms;

(c) *Atechna* Chevrolat, 1837 (gender: feminine), type species by present designation, *Chrysomela vulpina* Fabricius, 1781, with an endorsement that it is not to be given priority over *Chrysolina* Motschulsky, 1860, whenever the two names are regarded as synonyms;

(3) to place on the Official List of Specific Names in Zoology:

(a) *populi* Linnaeus, 1758, as published in the binomen *Chrysomela populi* (specific name of the type species of *Chrysomela* Linnaeus, 1758);

(b) *staphylaea* Linnaeus, 1758, as published in the bino-

men *Chrysomela staphylaea* (specific name of the type species of *Chrysolina* Motschulsky, 1860);

(c) *vulpina* Fabricius, 1781, as published in the binomen *Chrysomela vulpina* (specific name of the type species of *Atechna* Chevrolat, 1837).

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CHUANGIA WALCOTT, 1911, PROPOSED VALIDATION UNDER THE PLENARY POWERS; *SHANTUNGIA* WALCOTT, 1905, PROPOSED ADDITION TO THE OFFICIAL LIST (TRILOBITA). Z.N.(S.)635

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The application has two purposes: first, to seek the validation of the generic name *Chuangia* Walcott, 1911 in place of *Schantungia* Lorenz, 1906, and secondly to propose that the generic name *Shantungia* Walcott, 1905, be placed on the Official List.

2. The generic name *Schantungia* was introduced by Lorenz, 1906, *Z. deutsch. geol. Ges.*, vol. 58(1), p. 79, for a new genus of Cambrian trilobites with four originally included species, two of which were new; *S. buchruckeri* Lorenz, 1906 was placed first in the work. The name was derived from the Chinese province then customarily spelt in German 'Schantung'. No type species was fixed by Lorenz, and no subsequent designation is known.

3. Walcott, 1911, *Smiths. misc. Colls*, vol. 57(4), p. 72, considered *Schantungia* Lorenz, 1906, the spelling of which he misquoted as *'Shantungia'*, to be a junior homonym of the name that he had introduced in 1905 (*Proc. U.S. nat. Mus.*, vol. 29 (1415), p. 87) variously as *Shangtungia* and *Shantungia*, for a different Cambrian trilobite. He proposed *Chuangia* as a replacement name, but designated *Ptychoparia? batia* Walcott, 1905 as type species of the genus, and this was accepted by C. Lochman Balk, 1959, *Treatise invert. Paleontol.*, vol. O, p. 313. Walcott's 1911 action is, however, clearly invalid on three grounds: (1) following Article 56 of the Code, *Schantungia* is not a homonym of either *Shantungia* Walcott, 1905, or *Shangtungia* Walcott, 1905; (2) he designated as type species of the genus renamed *Chuangia* a species that was not among the originally included species of *Schantungia*; (3) he synonymised one of those species, *S. buchruckeri*, with his species, *Chuangia nitida*, described as new in 1911 (p. 85) but did not use the valid senior synonym for it. This erroneous procedure was followed by Resser, 1942, *Smiths. misc. Colls* vol. 101(15) p. 11.

4. *Chuangia* has been used in preference to *Schantungia* since 1934 in the following works: Reed, 1934; Kobayashi, 1934,

1937, 1960, 1967; Sun, 1935; Resser & Endo, 1937; Fromaget, 1941; Resser, 1942; Endo, 1944; Hupé, 1953; Lu Yen-hao, 1957; Bell, 1957; Chien Yi-yuan, 1958; Wang, 1958; Lochman Balk, 1959; Chernysheva, 1960; Chu Chao-ling, 1960; Stocklin *et al.*, 1964; Lu, Chang *et al.*, 1965; Cochen, 1967, 1968; Palmer, 1968; Kushan, 1973; Schrank, 1974, 1975; Lisogor, 1977; Zhou Tun-mei *et al.*, 1977 (a list of these references is held in the file in the Commission's Secretariat). No example has been traced of the subsequent use of *Schantungia,* nor any type species-fixation for the genus. In view of the general acceptance of *Chuangia* with *Ptychoparia? batia* as its type species, it is considered to be in the interests of nomenclatural stability to preserve this usage. The valid name *Chuangia buchruckeri* (Lorenz, 1906) was used in preference to *C. nitida* Walcott, 1911, by Lu, Chang *et al.*, 1965, *Zhonggo Gemenlei Huashi: Zhongguod Sanyechong* [*Fossils of each group of China: Chinese Trilobites*], vol. 1, p. 364, not following Walcott, 1911.

5. The second part of this application concerns the relative status of the two spellings *Shantungia* and *Shangtungia* Walcott, 1905.

6. Walcott, 1905, *Proc. U.S. nat. Mus.* vol. 29 (1415), p. 87) proposed *Shangtungia* for a new trilobite genus and designated *Shangtungia spinifera* Walcott, 1905 as its type species. On the next line the species was described as '*Shantungia spinifera* new species'. Elsewhere in the same paper (pp. 5, 9) it was listed as *Shangtungia spinifera.* In 1911 (*Smiths. misc. Colls,* vol. 57(4), p. 72) and again in 1913 (*Publs. Carnegie Inst.,* No. 54, Research in China, vol. 3, pp. II, V, 6, 7, 10, 53, 147, 148, 250, 255, 369) Walcott listed the genus as *Shantungia.* The 1913 work included a synonymy reference to his 1905 paper and contained a revised description of the genus and of its type species, and, in terms of Article 32b of the Code, is interpreted as action by a first reviser. *Shantungia* thereby became the valid spelling of the generic name.

7. Howell & Moore, 1959, *Treatise invert. Paleontol.,* vol. O, p. 248, adopted the spelling *Shangtungia* (although *Shantungia* was used for the illustration on p. O. 246), but this appears to be an exception to current usage, for the spelling *Shantungia* has been used in the following works: Resser & Endo, 1937; Resser, 1942; Endo, 1953; Kobayashi, 1956, 1960; Chang, 1957, 1959; Lu Yen-hao, Chang *et al.*, 1965; Öpik, 1967.

8. The International Commission on Zoological Nomenclature is therefore asked:

(1) to use its plenary powers

(a) to suppress the generic name *Schantungia* Lorenz, 1906, for the purposes of the Law of Priority but

not for those of the Law of Homonymy;

(b) to set aside all designations of type species hitherto made for the nominal genus *Chuangia* Walcott, 1911, and to designate *Ptychoparia? batia* Walcott, 1905, as type species of that genus;

(2) to place on the Official List of Generic Names in Zoology:

(a) *Chuangia* Walcott, 1911 (gender: feminine), type species, by designation under the plenary powers in (1)(b) above, *Ptychoparia? batia* Walcott, 1905;

(b) *Shantungia* Walcott, 1905 (gender: feminine), type species, by original designation, *Shantungia spinifera* Walcott, 1905 (a correct original spelling by virtue of the first reviser action of Walcott, 1913);

(3) to place on the Official List of Specific Names in Zoology:

(a) *batia* Walcott, 1905, as published in the binomen *Ptychoparia? batia* (specific name of type species of *Chuangia* Walcott, 1911);

(b) *spinifera* Walcott, 1905, as published in the binomen *Shantungia spinifera* (specific name of type species of *Shantungia* Walcott, 1905);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology:

(a) *Schantungia* Lorenz, 1906, as suppressed under the plenary powers in (1)(a) above;

(b) *Shangtungia* Walcott, 1905, an incorrect original spelling by virtue of the first reviser action of Walcott, 1913.

Readers of the Bulletin are reminded that the main regular source of income to finance the work of the Commission comes from sales of this periodical, and that this is insufficient to meet the needs of zoologists for the services provided by the Commission and to maintain the office at an efficient level. Help in the form of donations and bequests will, therefore, be received with gratitude.

The International Trust for Zoological Nomenclature wishes to express its appreciation of the facilities provided by the Trustees of the British Museum (Natural History) for the Secretariat of the Commission.

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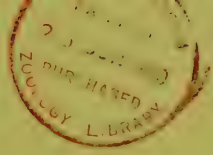

THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The Official Organ of

THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

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LONDON

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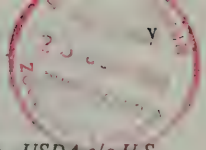

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 37, part 2 (pp. 65 - 128) 19 June, 1980

NOTICES

(a) *Date of commencement of voting.* In normal circumstances the Commission may start to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after the publication of each application. Any zoologist who wishes to comment on any of the applications in the present part is invited to send his contribution, in duplicate, to the Secretariat of the Commission as quickly as possible, and in any case in time to reach the Secretariat before the close of the six-month period.

(b) *Possible use of the plenary powers.* The possible use by the Commission of its plenary powers is involved in the following applications published in the present part of the *Bulletin* (those marked with an asterisk involve the application of Articles 23a-b and 79b):

(1) *Nettastomella* Carpenter, 1865 (Mollusca, Bivalvia: PHOLADIDAE): proposed conservation. Z.N.(S.)1054. (E.V. Coan & G.L. Kennedy).

(2) *Heterelis* Costa, 1887 (Insecta, Hymenoptera): proposed procedure for concluding the case. Z.N.(S.)1175. (Secretary).

*(3) *Leptinotarsa* Chevrolat, 1837 (Insecta, Coleoptera): revised proposals for conservation. Z.N.(S.)2048. (R.E. White).

(4) *Cyphaspis* Burmeister, 1843 (Trilobita): proposed designation of type species. Z.N.(S.)2257. (A.T. Thomas & R.M. Owens).

(5) *Sternotherus* Gray, 1825, correct spelling; and *Pelusios* Wagler, 1830 (Reptilia, Testudines): proposed conservation. Z.N.(S.)2278. (H.M. & R.B. Smith & D. Chiszar).

(c) *Receipt of new applications.* The following new applications have been received since the publication of vol. 37(1) on 8th May 1980. Those marked with an asterisk involve the application of Articles 23a-b and 79b.

(1) EPHYDRIDAE Zetterstedt, 1837: proposal to give precedence over HYDRELLIIDAE Robineau-Desvoidy,

1830 (Insecta, Diptera). Z.N.(S.)2334. (W.N. Mathis)

(2) *Indodorylaimus* Ali & Prabha, 1974 (Nematoda, Dorylaimida): proposed designation of type species. Z.N.(S.)2335 (Q.H. Bagri).

(3) *Chelonus* Jurine *in* Panzer, 1801, and *Anomala* Samouelle, 1819 (Insecta, Hymenoptera): proposed conservation. Z.N.(S.)2336. (C. van Achterberg).

(4) *Crotalocephalus* Salter, 1853 (Trilobita): proposed designation of type species. Z.N.(S.)2337. (P.D. Lane).

*(5) *Hydrodamalis* Retzius, 1794; *Trichechus inunguis* (Natterer *in* Pelzeln, 1839) (Mammalia, Sirenia): proposed conservation. Z.N.(S.) 2338 (D.P. Domning).

(6) *Kinosternon alamose* and *K. oaxacae* Pritchard, 1979 (Reptilia, Testudines): proposed suppression. Z.N.(S.) 2339. (P.C.H. Pritchard & N. Pronek).

SPECIAL ANNOUNCEMENT

The Editorial Committee on the Third Edition of the International Code on Zoological Nomenclature held its final meeting in London from 28 April to 3 May 1980. The main purpose of the meeting was to finalise the draft text of the Code (subject to votes by the Commission on a number of points) in accordance with the instruction of the Division of Zoology of I.U.B.S. at Helsinki in 1979. The opportunity was taken to hold a joint meeting between members of the Council of the Commission and the Management Committee of the International Trust for Zoological Nomenclature. The Trust wishes to express its grateful thanks for a grant by the Trustees of the Nuffield Foundation towards the expenses of the Editorial Committee meeting.

c/o British Museum (Natural History)
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R.V. MELVILLE
Secretary,
International Commission on
Zoological Nomenclature
May 1980

COMMENT ON THE PROPOSED DESIGNATION OF A TYPE SPECIES FOR *GNATHODUS* PANDER, 1856 (CONODONTA). Z.N.(S.) 2279

(see vol. 36, pp. 57–62; pp. 201–202)

By Thomas L. Thompson (*Missouri Department of Natural Resources, P.O. Box 250 Rolla, Missouri 65401, U.S.A.*)

Forms identified as *Gnathodus* have been recovered from samples of earliest to latest Mississippian in age (Kinderhookian through middle Chesterian Series in North America). Within the lower Mississippian (Kinderhookian-Osagean Series) *Gnathodus* is the major element of conodont biostratigraphic zonation, being one of the name givers in six out of nine zones proposed by Thompson & Fellows, 1970, *Missouri Geol. Surv. Rep. Inv.*, no. 45, for southwestern Missouri strata. It is also a major element in lower and upper Meramecian and Chesterian biostratigraphic zonations.

The loss of, or renaming of, forms now identified as *Gnathodus* would seriously hinder present and future understanding and usefulness of conodont biostratigraphic zonation in the Mississippian System of North America and the Lower Carboniferous of Europe. The proposal by Lane & Ziegler to designate *Gnathodus texanus* Roundy as the type species is a good one in that *G. texanus* is a well-understood form, and its relationship to the development of the genus has been documented (Thompson, 1979, *Lethaia* vol. 12). For stability of nomenclature of this important Mississippian biostratigraphic tool and for accurate designation of the morphological concepts to which the generic name *Gnathodus* has been given in the literature for over 40 years, I recommend acceptance of their proposal.

[Editor's note: Dr. Walter Schäfer (*Geologisches Landesamt Nordrhein-Westfalen, Krefeld, B.R.D.*) also supports the application.]

COMMENT ON INTERMEDIATE CATEGORIES IN THE SPECIES GROUP Z.N.(S.) 2250

(see vol. 36, pp. 71-72)

By Hans Silfverberg (*Zoological Museum, University of Helsinki, SF-00100 Helsinki, Finland*)

A proposal was recently introduced by Bernardi and Melville (*Bull. zool. Nom.* vol. 36, pp. 71–72) to add some intermediate categories to the species group, one above the species and representing a group of closely related allopatric species, the other between species and subspecies, forming subspecies groups. The latter category has been used sometimes, e.g. by Breuning in his large *Carabus* revision (*Best.–Tab. eur.* Coleopt., Hefte 104-110, 1932-36), although his terminology was somewhat different. Breuning called the local taxon "natio", and grouped several nationes into subspecies, but within the provisions of the Code is natio is a subspecific taxon. Breuning's presentation

of the geographical forms was the same, which Bernardi and Melville propose, so their proposal would, at least in its latter part, give official consent to an existing, although infrequent, usage.

As for the supra-specific epithet, I suppose it will have its use, too. I would only recommend a quite firm wording lest it be used undiscriminatingly for species groups in general, all the more since species groups sometimes even have been used instead of subgenera. On the other hand, provisions should be made for allopatry existing only in microhabitats, as seen e.g. in the fish genus *Coregonus*.

I do have some apprehensions of a practical kind in connection with this proposal. I am sure that we do not wish to see faunistic lists etc. cluttered with strings of names like *Carabus* (*Mesocarabus*) *problematicus* (*gallicus*) *strandi* Born, or even *Carabus* (*Procrustes*) (*violaceus*) *violaceus* (*violaceus*) *violaceus* L. Maybe a recommendation should be inserted, saying an author should use the intermediate categories only when he considers that they give necessary information for the publication in question.

Maybe some thought also should be given to certain other intermediate categories, sometimes in use. At least in the large genera *Carabus* and *Otiorhynchus* an infrasubgeneric category has been used, with names of the generic type. The names themselves are naturally covered by the provisions of the Code, but should their presentation in text be formalized?

In the family group we meet several categories, four of which are named in the Code. Yet only the family and subfamily endings are mandatory, for superfamilies and tribes we only have a recommendation that the endings should be -oidea and -ini. Should the latter ones also be made mandatory? In addition, the category subtribe, normally ending in -ina, is rather frequently in use in large families. Perhaps it should be mentioned in the Code, with the ending given in a recommendation.

OPINION 1149
BLANUS WAGLER, 1830, AND *AMPHISBAENA CINEREA* VANDELLI, 1797 (REPTILIA SQUAMATA) CONSERVED

RULING – (1) Under the plenary powers, the specific name *recticulata* C.P. Thunberg, 1787, as published in the binomen *Amphisbaena reticulata*, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

(2) The generic name *Blanus* Wagler, 1830 (gender: masculine), type species, by monotypy, *Amphisbaena cinerea* Vandelli, 1797, is hereby placed on the Official List of Generic Names in Zoology with the Name Number 2098.

(3) The specific name *cinerea* Vandelli, 1797, as published in the binomen *Amphisbaena cinerea* (specific name of type species of *Blanus* Wagler, 1830), is hereby placed on the Official List of Specific Names in Zoology with the Name Number 2700.

(4) The specific name *reticulata* C.P. Thunberg, 1787, as published in the binomen *Amphisbaena reticulata*, and as suppressed under the plenary powers in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology with the Name Number 1063.

HISTORY OF THE CASE Z.N.(S.) 1468

An application for the suppression of *Amphisbaena reticulata* C.P. Thunberg, 1787, was first received from Dr Carl Gans (then of *University of Buffalo, New York*) on 28 September 1960. It was sent to the printer on 8 December 1960 and was published on 16 June 1961 in *Bull. zool. Nom.* vol. 18, pp. 223–224.

The proposal was supported by Professor Hobart M. Smith. No adverse comment was received. Notice of the possible use of the plenary powers in the case had been given to two herpetological serials.

FIRST VOTE OF THE COMMISSION

On 31 May 1962 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (62)22 for or against the proposals set out in *Bull. zool. Nom.* vol. 18, p. 223. A note on the Voting Paper stated that the case had

been published before the new (1961) edition of the Code had come into force, and that *Amphisbaena reticulata* C.P. Thunberg, 1787 could be automatically rejected under the provisions of Article 23b without the use of the plenary powers. At the close of the voting period on 31 August 1962 there were 24 affirmative votes and no negative votes. Two late affirmative votes were returned.

For reasons that cannot now be known, no Opinion was issued following this vote.

SUBSEQUENT HISTORY OF THE CASE

When I came to examine the file on case Z.N.(S.)1468 in 1974, I thought that it would be unwise to issue an Opinion after so long a delay. I therefore asked Professor Gans to supply the references required, under the revised Articles 23a-b and 79b of 1972, to establish a prima facie case for the conservation of *Amphisbaena cinerea* Vandelli, 1797. The application was therefore republished, with the references provided by Professor Gans, on 27 June 1975 in *Bull. zool. Nom.* vol. 32, pp. 113–114. Public notice of the possible use of the plenary powers was given in the same part of the *Bulletin* as well as to the statutory serials and two herpetological serials.

At the same time, I sought approval from the Council to publish an Opinion on the case as soon as statutorily possible, without proceeding to a second vote if there were no adverse comments. This suggestion was not approved; in any event, a comment was received from Professor Mroczkowski suggesting that the "relative precedence" procedure should be applied. This, with Professor Gans's rebuttal, was published in *Bull. zool. Nom.* vol. 32, pp. 199–200. No other comment was received.

DECISION OF THE COMMISSION

On 20 August 1979 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (79)5 for or against the proposals set out in *Bull. zool. Nom.* vol. 32: 114. At the close of the voting period on 20 November 1979 the state of the voting was as follows:

Affirmative Votes – nineteen (19), received in the following order: Melville, Vokes, Holthuis, Alvarado, Hahn, Mroczkowski, Willink, Trjapitzin, Tortonese, Sabrosky, Habe, Welch, Brinck, Bernardi, Corliss, Nye, Cogger, Heppell, Bayer

Negative Vote – Dupuis.

Late Affirmative Votes were received from Kraus, Halvorsen and Starobogatov. Ride was on leave of absence. Binder did not vote.

The following comments were sent in by members of the Commission with their votes:

Hahn: 'The objection of Dr Mroczkowski is important. But the possibility of finding the type material of *A. reticulata* seems to be so small that I nevertheless agree with hesitation to Dr Gans's proposal.'

Bernardi: " 'For' avec réserve. Je préfère, malgré les arguments de Gans, la modification proposée par Mroczkowski."

Dupuis: "Je vote contre la supression pour les raisons invoquées par Mroczkowski. Mais je vote aussi contre la falsification de dates que supposerait la procédure de 'relative precedence'. En fait, *A. reticulata* est un nomen quasi-nudum qui ne gêne personne."

Nye: "I would, like Dr Mroczkowski, have preferred that *A. cinerea* be given precedence over *A. reticulata.* However, in view of Dr Gans's reply, I support his application."

ORIGINAL REFERENCES

The following are the original references for the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

Blanus Wagler, 1830, *Nat. System der Amphibien . . .*, München, Stuttgart and Tübingen, p. 197

cinerea, Amphisbaena, Vandelli, D., 1797, *Mem. Acad. real Sci. Lisboa,* p. 69

reticulata, Amphisbaena, C.P. Thunberg, 1787, *D.D. Mus. Nat. Acad. Upsaliensis,* p. 30.

CERTIFICATE

I certify that the votes cast on V.P.(79)5 were cast as set out above, that the proposal contained in that voting paper has been duly adopted under the plenary powers, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1149.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
2 January 1980

OPINION 1150
CHILODUS MÜLLER & TROSCHEL, 1844, AND *CAENOTROPUS* GUENTHER, 1864 (PISCES) PLACED ON THE OFFICIAL LIST

RULING – (1) The following generic names are hereby placed on the Official List of Generic Names in Zoology with the Name Numbers specified:

(a) *Chilodus* Müller & Troschel, 1844 (gender: masculine), type species, by monotypy, *Chilodus punctatus* Müller & Troschel, 1844 (Name Number 2099);

(b) *Caenotropus* Guenther, 1864 (gender: masculine), type species, by subsequent designation by Eigenmann, 1910, *Microdus labyrinthicus* Kner, 1858 (Name Number 2100).

(2) The following specific names are hereby placed on the Official List of Specific Names in Zoology with the Name Numbers specified:

(a) *punctatus* Müller & Troschel, 1844, as published in the binomen *Chilodus punctatus* (specific name of type species of *Chilodus* Müller & Troschel, 1844) (Name Number 2701);

(b) *labyrinthicus* Kner, 1858, as published in the binomen *Microdus labyrinthicus* (specific name of type species of *Caenotropus* Guenther, 1864) (Name Number 2702).

HISTORY OF THE CASE Z.N.(S.) 1502

An application for a ruling on the validity of a designation of type species for the nominal genera *Chilodus* Müller & Troschel, 1844 and *Caenotropus* Guenther, 1864 was first received from Messrs J.R. Géry (*Strasbourg, France*) and J.J. Hoedeman (*Zoological Museum, Amsterdam, Netherlands*) on 18 October 1961. It was sent to the printer on 20 October 1961 and published on 28 May 1962 in *Bull. zool. Nom.* vol. 19, pp. 191–192. No use of the plenary powers was asked for. An adverse comment by E. Trewavas and P.H. Greenwood (*British Museum (Natural History) London*) was published in *Bull. zool. Nom.* vol. 20, p.147.

FIRST VOTE OF THE COMMISSION

On 24 October 1963 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1963) 30 for or against the proposals set out in *Bull. zool. Nom.* vol. 19, p. 192. At the close of the voting period on 24 January 1964 there were eight affirmative votes, 21 negative votes, and one voting paper not returned. The proposals of Messrs Géry & Hoedeman were thus rejected; but the contrary proposals of Trewavas & Greenwood, not having been specifically voted on, had not been adopted. No action to resolve this stalemate was taken at that time.

SUBSEQUENT HISTORY OF THE CASE

On 31 October 1969 I received a letter from Dr L.B. Holthuis asking me to look into the reasons why no Opinion had been published on the original application. When I came to deal with this request (with the help of the late Dr W.E. China), I found that the facts had not been fully or clearly presented to the Commission. I therefore prepared a report to the Commission in which these facts were stated. I proposed that the Commission, in resolving the stalemate resulting from its earlier vote, should rule that the Code should be directly applied to the case, since this would confirm existing practice among ichthyologists. My report was published on 28 March 1975 in *Bull. zool. Nom.* vol. 32, pp. 45–50. No use of the plenary powers was involved. No comment was received.

DECISION OF THE COMMISSION

On 20 August 1979 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1979)6 for or against the proposals set out in *Bull. zool. Nom.* vol. 32, pp. 49–50. At the close of the voting period on 20 November 1979 the state of the voting was as follows:

Affirmative Votes – nineteen (19) received in the following order: Melville, Vokes, Holthuis, Alvarado, Hahn, Willink, Trjapitzin, Tortonese, Sabrosky, Habe, Welch, Brinck, Bernardi, Bayer, Dupuis, Corliss, Nye, Cogger, Heppell

Negative Vote – Mroczkowski.

Late Affirmative Votes were returned by Kraus, Halvorsen and Starobogatov. Ride was on leave of absence. No vote was returned by Binder.

In returning his voting paper Dr Sabrosky observed: 'My quoted comment (2) [see *Bull. zool. Nom.* vol. 32, p. 48] was not

well stated, but it is still my strong feeling that the simple application of the *Règles* (the 1961 Code may not have been available to Géry & Hoedeman) would have rendered this application unnecessary.'

ORIGINAL REFERENCES

The following are the original references for the names placed on Official Lists by the ruling given in the present Opinion:

Caenotropus Guenther, 1864, *Cat. Fishes Brit. Mus.* vol. 5, p. 297

Chilodus Müller & Troschel, 1844, *Arch. Naturg.* Jahrgang 10, vol. 1, p. 85

labyrinthicus, Microdus, Kner, 1858, *Sitzungsber. k. Akad. Wiss. Wien,* vol. 30, Heft 13, p. 77

punctatus, Chilodus, Müller & Troschel, 1844, *Arch. Naturg.,* Jahrgang 10, vol. 1, p. 85

The following is the original reference to a designation of type species accepted in the ruling given in the present Opinion: of *Microdus labyrinthicus* Kner, 1858, as type species of *Caenotropus* Guenther, 1864 by Eigenmann, 1910, *Repts Princeton Univ. Expeds Patagonia, 1896-9,* vol. 3, part 4, p. 424.

CERTIFICATE

I certify that the votes cast on V.P.(79)6 were cast as set out above, that the proposal contained in that voting paper has been duly adopted, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1150.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
2 January 1980

OPINION 1151
LINGULOPS HALL, 1872 (BRACHIOPODA) CONSERVED

RULING – (1) Under the plenary powers the generic name *Ligulops* Hall, 1871, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

(2) The generic name *Lingulops* Hall, 1872 (gender: masculine), type species, by monotypy, *Lingulops whitfieldi* Hall, 1872, is hereby placed on the Official List of Generic Names in Zoology with the Name Number 2101.

(3) The specific name *whitfieldi* Hall, 1872, as published in the binomen *Lingulops whitfieldi* (specific name of type species of *Lingulops* Hall, 1872) is hereby placed on the Official List of Specific Names in Zoology with the Name Number 2703.

(4) The generic name *Ligulops* Hall, 1871, as suppressed under the plenary powers in (1) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology with the Name Number 2114.

HISTORY OF THE CASE Z.N.(S.) 1505

An application from Dr A.J. Rowell (then of *University of Nottingham, England*) for the conservation of the generic name *Lingulops* Hall, 1872, was first received on 31 October 1961. It was sent to the printer on 6 December 1961 and published on 10 September 1962 in *Bull. zool. Nom.* vol. 19, p. 310. Public notice of the possible use of the plenary powers in the case was given in the same part of the *Bulletin* as well as to the statutory journals and five specialist journals. In the uncertainty that then prevailed concerning the interpretation of Article 23b of the 1961 Code, it was not clear whether *Lingulops* Hall, 1872, could be treated as an emendation of *Ligulops* and, if so, whether *Ligulops* Hall, 1871 and 1872 could be dealt with under that provision. These aspects were discussed by Dr L.B. Holthuis and the late Professor Chester Bradley and general agreement was reached that the case would be best treated by use of the plenary powers, but the case was not then put to a vote. The application was supported by Dr Arthur J. Boucot (*California Institute of Technology*) and Dr J.A. Talent (*Geological Survey of Victoria, Australia*).

The file was reopened in October 1974 when a revised presentation of the case was sent to Dr Rowell (by that time at the *University of Kansas, Lawrence, Kansas, U.S.A.*) and approved

by him. It was sent to the printer on 19 November 1974 and published on 27 March 1975 in *Bull. zool. Nom.* vol. 32, p. 51. Public notice of the possible use of the plenary powers in the case was again given. No comments were received.

DECISION OF THE COMMISSION

On 20 August 1979 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1979)7 for or against the proposals set out in *Bull. zool. Nom.* vol. 32, p. 51. At the close of the voting period on 20 November 1979 the state of the voting was as follows:

Affirmative Votes – seventeen (17) received in the following order: Melville, Vokes, Holthuis, Alvarado, Hahn, Mroczkowski, Willink, Trjapitzin, Tortonese, Sabrosky, Welch, Brinck, Habe, Corliss, Bayer, Nye, Heppell

Abstentions – Dupuis, Cogger

Negative Vote – Bernardi.

Late affirmative votes were returned by Kraus, Halvorsen and Starobogatov. Ride was on leave of absence. No vote was returned by Binder.

The following comments were returned by members of the Commission with their voting papers:

Hahn: 'I fully agree with Dr Rowell's proposal. Also, even if the emendation of Hall, 1872, is invalid, it was apparently his "*intentio auctoris*" to name his genus *Lingulops.* This is proved by his notice "Printed *Ligulops* by mistake in some copies of this paper. *Ligulops,* suppressed as a *nomen oblitum* under Art. 23a-b before 1973 should not come into use again because of an alteration of Art. 23 that I consider awkward.'

Bernardi: 'Il ne me semble pas que l'emploi de *Ligulops* constitue une source de confusion. Pourquoi ne pas appliquer strictement le Code et écrire désormais *Ligulops* au lieu de *Lingulops* en "renvenant aux sources"?'

Dupuis: 'Je vote pour *Lingulops* avec la date de *1871* (puisque les deux descriptions sont identiques). Hall savait très bien ce qu'il faisait et toutes nos mesquineries n'y changeront rien.'

Cogger: 'This proposal is surely unnecessary. All authors have apparently assumed that *Ligulops* Hall, 1871 was a lapsus for *Lingulops,* i.e. they have regarded *Lingulops* as a valid emendation of *Ligulops.* Indeed, a statement by the original author that the latter name was "printed . . . by mistake" for *Lingulops* can reasonably be argued as a justified emendation under Article 33a(i), and I would regard it as such. However, if it was felt necessary to

remove any ambiguity an appropriate course would seem to be to use the plenary powers to confirm *Lingulops* Hall, 1872 as a justified emendation of *Ligulops* Hall, 1871.'

ORIGINAL REFERENCES

The following are the original references to names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

Ligulops Hall, 1871, *Preliminary Notice: 23rd Report State Cabinet Nat. Hist . . . Paleontology New York*, p. 2

Lingulops Hall, 1872, *23rd Report State Cabinet Nat. Hist.*, p. 245

whitfieldi, Lingulops, Hall, 1872, *23rd Report State Cabinet Nat. Hist.*, expl. pl. 13, figs. 1, 2.

CERTIFICATE

I certify that the votes cast on V.P.(79)7 were cast as set out above, that the proposal contained in that voting paper has been duly adopted under the plenary powers, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1151.

R.V. MELVILLE
Secretary

International Commission on Zoological Nomenclature
London
4 January 1980

OPINION 1152
OPHIURA LAMARCK, 1801 AND *OPHIODERMA* MULLER & TROSCHEL, 1840 (OPHIUROIDEA): RULING ON APPLICATION OF THESE NAMES

RULING – (1) Under the plenary powers all designations of lectotype for the nominal species *Asterias ophiura* Linnaeus, 1758, hitherto made are hereby set aside, and the specimen illustrated by Linck, 1733, plate 2, number 4, is hereby designated as lectotype of that species.

(2) The following generic names are hereby placed on the Official List of Generic Names in Zoology with the Name Numbers specified:

(a) *Ophiura* Lamarck, 1801 (gender: feminine), type species by absolute tautonymy, *Asterias ophiura* Linnaeus, 1758 (Name Number 2102);

(b) *Ophioderma* Müller & Troschel, 1840 (gender: feminine), type species, by subsequent designation by H.L. Clark, 1915, *Asterias longicauda* Retzius, 1805 (Name Number 2103).

(3) The following specific names are hereby placed on the Official List of Specific Names in Zoology with the Name Numbers specified:

(a) *ophiura* Linnaeus, 1758, as published in the binomen *Asterias ophiura,* and as defined by the lectotype designated under the plenary powers in (1) above (specific name of type species of *Ophiura* Lamarck, 1801) (Name Number 2704);

(b) *longicauda* Retzius, 1805, as published in the binomen *Asterias longicauda* (specific name of type species of *Ophioderma* Müller & Troschel, 1840) (Name Number 2705).

(4) The following family-group names are hereby placed on the Official List of Family-Group Names in Zoology with the Name Numbers specified:

(a) OPHIURIDAE Müller & Troschel, 1840 (type genus *Ophiura* Lamarck, 1801) (Name Number 504);

(b) OPHIODERMATIDAE Ljungman, 1867 (type genus *Ophioderma* Müller & Troschel, 1840 (Name Number 505).

HISTORY OF THE CASE Z.N.(S) 1772

An application for the stabilisation of some names of common European Ophiuroidea was first received from Miss Ailsa Clark (*British Museum (Natural History), London*) on 7 September 1966. It was sent to the printer on 10 January 1967 and published on 27 April 1967 in *Bull. zool. Nom.* vol. 24, pp. 98–115. Objections to the application were raised by Dr L.B. Holthuis, and the case was not then pursued further. When I came to examine the file in April 1974, I saw that progress could only be made by studying the many names involved individually, and Miss Clark kindly agreed to this procedure. We then prepared a fresh application concerning only *Ophiura* and *Ophioderma* which was sent to the printer on 14 October 1975 and published on 30 January 1976 in *Bull. zool. Nom.* vol. 32, pp. 265–267. Public notice of the possible use of the plenary powers in the case was given in the same part of the *Bulletin* as well as to the statutory serials and to seven other serials. No comments were received.

DECISION OF THE COMMISSION

On 20 August 1979 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1979)9 for or against the proposals set out in *Bull. zool. Nom.* vol. 32, p. 267. At the close of the voting period on 20 November 1979 the state of the voting was as follows:

Affirmative Votes – nineteen (19) received in the following order: Melville, Vokes, Holthuis, Alvarado, Hahn, Mroczkowski, Willink, Trjapitzin, Tortonese, Sabrosky, Welch, Brinck, Bernardi, Habe, Dupuis, Corliss, Bayer, Heppell, Nye

Negative Votes – none (0).

Late affirmative votes were sent in by Kraus, Halvorsen and Starobogatov. Ride was on leave of absence. No vote was returned by Binder and Cogger.

The following comments were sent in by members of the Commission with their voting papers:

Hahn: 'In the application the authorship and date of OPHIURIDAE are given as Müller & Troschel, 1840 (as "Ophiuren"); this is in accordance with Article 11e(iii). But the *Treatise on Invertebrate Paleontology* p. U93 gives "OPHIURIDAE Lyman, 1865", and Lyman, as far as I know, was the first author to use the fully latinised form of that family name. I fear that at least in the palaeontological literature most authors with follow the *Treatise*.'

Tortonese: 'It must be admitted that it is very regrettable

to abandon the specific name *texturata* for a species of *Ophiura* so widely known under that name.'

ORIGINAL REFERENCES

The following are the original references for names placed on Official Lists by the ruling given in the present Opinion:

longicauda, Asterias, Retzius, 1805, *Diss. sist. spec. cogn. Ast.*, p. 29

Ophioderma Müller & Troschel, 1840, *Arch. Naturges.* Jahrgang 6, vol. 1, p. 329

OPHIODERMATIDAE Ljungman, 1867, *Ofv. k. Vetensk. Akad. Forh.*, for 1866, p. 303

Ophiura Lamarck, 1801, *Syst. anim. s. vert.*, p. 350

ophiura, Asterias, Linnaeus, 1758, *Syst. Nat.* ed. 10, vol. 1, p. 662

OPHIURIDAE Müller & Troschel, 1840, *Arch. Naturges.* Jahrgang 6, vol. 1, p. 329.

CERTIFICATE

I certify that the votes cast on V.P.(79)9 were cast as set out above, that the proposal contained in that voting paper has been duly adopted under the plenary powers, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1152.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
4 January 1980

OPINION 1153
GALAXIAS PLATEI STEINDACHNER, 1898, GIVEN NOMENCLATURAL PRECEDENCE OVER *GALAXIAS DELFINI* PHILIPPI, 1895, (PISCES) BY THE USE OF THE PLENARY POWERS

RULING – (1) Under the plenary powers it is hereby ruled that the specific name *platei* Steindachner, 1898, as published in the binomen *Galaxias platei,* is to be given nomenclatural precedence over the specific name *delfini* Philippi, as published in the binomen *Galaxias delfini.*

(2) The specific name *platei* Steindachner, 1898, as published in the binomen *Galaxias platei,* is hereby placed on the Official List of Specific Names in Zoology with the Name Number 2706, and with the endorsement that it is to be used in preference to the specific name *delfini* Philippi, 1895, as published in the binomen *Galaxias delfini,* whenever the two names are regarded as synonyms.

(3) The specific name *delfini* Philippi, 1895, as published in the binomen *Galaxias delfini,* is hereby placed on the Official List of Specific Names in Zoology with the Name Number 2707, and with an endorsement that it is not to be given priority over the specific name *platei* Steindachner, 1898, as published in the binomen *Galaxias platei,* whenever the two names are regarded as synonyms.

HISTORY OF THE CASE Z.N.(S.) 1877

An application for the conservation of *Galaxias platei* Steindachner, 1898, by the rejection of its unused senior synonym *G. delfini* Philippi, 1895, was first received from Dr R.M. McDowall (*Fisheries Research Division, Wellington, New Zealand*) on 22 January 1969. Dr McDowall supposed that the senior name could be automatically rejected under the provisions of Article 23b (of the 1961 Code); but as the application of that provision was obscure, and as it was then being examined by a committee of the Commission under Professor Ernst Mayr, publication of the application was deferred. A revised application asking for the suppression of *G. delfini* by the use of the plenary powers was eventually sent to the printer on 2 April 1973 and published on

10 October 1973 in *Bull. zool. Nom.* vol. 30, pp. 88–89. In both the original and the revised versions of his paper Dr McDowall had provided *prima facie* evidence in support of his case as required under Articles 23a-b, 79b. Public notice of the possible use of the plenary powers in the case was given in the same part of the *Bulletin* as well as to the statutory serials and to an ichthyological serial. The application was supported by Dr A.P. Andrews (*Tasmanian Museum*) and clarified by Dr Lemche, whose observations were published in *Bull. zool. Nom.* vol. 31, p. 8.

FIRST VOTE OF THE COMMISSION

On 10 February 1976 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1976)12 for or against the proposals set out in *Bull. zool. Nom.* vol. 30, p. 88 and as clarified in vol. 31, p. 8. At the close of the voting period on 10 May 1976 the state of the voting was as follows:

Affirmative Votes – thirteen (13) received in the following order: Melville, Holthuis, Mayr, Lemche, Eisenmann, Vokes, Willink, Tortonese, Mroczkowski, Corliss, Rohdendorf, Heppell, Bayer

Negative Votes – four (4): Sabrosky, Bernardi, Nye, Dupuis.

Late affirmative votes were received from Alvarado, Ride, Habe and Brinck. Binder and Erben were on leave of absence. No votes were returned by Kraus, Simpson and Starobogatov.

The following comments were returned by members of the Commission with their voting papers:

Sabrosky: 'The fact that so many authors uncritically accepted and followed Regan's error is depressing.'

Nye: 'I should be willing to vote in favour of a ruling that *G. platei* should be given nomenclatural precedence over *G. delfini* by anyone treating them as conspecific, but I am not willing to vote for the suppression of a subjective synonym especially when there is no mention of the type specimens of the taxa concerned.'

Bernardi: 'Il ne semble pas s'agir ici de poisson présentant une importance économique. Je préfère appliquer la Loi de Priorité.

Ride (with a late vote): 'I consider that the relevant precedence procedure should be applied, if the applicant agrees.'

These comments were communicated to Dr McDowall, who agreed that the relative precedence procedure should be applied. Since that entailed a use of the plenary powers that had not been advertised it was necessary to prepare a fresh application. This was sent to the printer on 29 March 1977 and published on 31 August 1977 in *Bull. zool. Nom.* vol. 34, p. 80. Public notice of the

possible use of the plenary powers was given in the same part of the *Bulletin* as well as to the statutory serials and to 12 other serials. No comment was received.

DECISION OF THE COMMISSION

On 20 August 1979 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1979)11 for or against the proposals set forth in *Bull. zool. Nom.* vol. 34, p. 80. At the close of the voting period on 20 November 1979 the state of the voting was as follows:

Affirmative Votes – seventeen (17), received in the following order: Melville, Holthuis, Vokes, Alvarado, Mroczkowski, Willink, Trjapitzin, Tortonese, Hahn, Welch, Brinck, Bernardi, Bayer, Habe, Corliss, Nye, Cogger

Negative Votes – Dupuis, Heppell.

Sabrosky abstained. Late affirmative votes were returned by Kraus, Halvorsen and Starobogatov. Ride was on leave of absence. No vote was returned by Binder.

The following comments were sent in by members of the Commission with their voting papers:

Dupuis: 'Je confirme mon vote contre de 1976 – et j'ajoute que le mélange de nomenclature et de taxinomie qu'on nous propose aujourd'hui n'est pas une pratique claire et heureuse.'

Heppell: 'I vote for the original proposal requesting the suppression of *G. delfini* and for letting the vote on V.P.(76)12 stand. I also think the new voting paper should have clearly offered this option, as otherwise it seems that *G. delfini* will be placed on the Official List whichever way the Commission votes.'

ORIGINAL REFERENCES

The following are the original references for names placed on an Official List by the ruling given in the present Opinion:

delfini, Galaxias, Philippi, 1895, *Verh. deutsch wiss. Ver. Santiago Chile,* vol. 3, pp. 17–22

platei, Galaxias, Steindachner, 1898, *Zool. Jahrb,* Suppl. vol. 4, p. 329.

CERTIFICATE

I certify that the votes cast on Voting Paper (79)11 were cast

as set out above, that the proposal contained in that voting paper has been duly adopted under the plenary powers, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1153.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
8 January 1980

OPINION 1154
DRUPELLA THIELE, 1925 (MOLLUSCA, GASTROPODA): DESIGNATION OF A TYPE SPECIES BY THE USE OF THE PLENARY POWERS

RULING – (1) Under the plenary powers, all designations of type species hitherto made for the genus *Drupella* Thiele, 1925, are hereby set aside, and the nominal species *Purpura elata* Blainville, 1832, is hereby designated as type species of that genus.

(2) The generic name *Drupella* Thiele, 1925 (gender: feminine), type species, by designation under the plenary powers in (1) above, *Purpura elata* Blainville, 1832, is hereby placed on the Official List of Generic Names in Zoology with the Name Number 2104.

(3) The specific name *cornus* Roeding, 1798, as published in the binomen *Drupa cornus,* is hereby placed on the Official List of Specific Names in Zoology with the Name Number 2708.

HISTORY OF THE CASE Z.N.(S.) 1891

An application for the use of the plenary powers to designate a type species for the genus *Drupella* Thiele, 1925, was first received from Dr W.O. Cernohorsky (*Auckland Institute and Museum, New Zealand*) on 11 June 1969. It was sent to the printer on 26 August 1969 and published on 7 April 1970 in *Bull. zool. Nom.* vol. 26, pp. 233–234. Public notice of the possible use of the plenary powers in the case was given in the same part of the *Bulletin* as well as to the statutory serials and to two malacological serials. The application was supported by Dr Harald Rehder (*U.S. National Museum*).

FIRST VOTE OF THE COMMISSION

On 9 June 1971 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1971)14 for or against the proposals set out in *Bull. zool. Nom.* vol. 26, p. 234. At the close of the voting period on 9 September 1971 the state of the voting was as follows:

Affirmative Votes – sixteen (16) received in the following order: Holthuis, Vokes, Mayr, Lemche, Melville, Binder, Jaczewski, Simpson, Starobogatov, Bonnet, Alvarado, Eisenmann, Tortonese,

Forest, Ride, Munroe

Negative Votes – none (0).

Sabrosky abstained from voting. A late affirmative vote was returned by Brinck. No voting paper was returned by Kraus.

The following comments were sent in by members of the Commission with their voting papers:

Sabrosky: 'I raise the point of order that under Article 70a the Commission should choose between *Drupa cornus* Roeding [Art. 70a(i)] or *Ricinula siderea* Reeve [Art. 70a(iii)], and not *Sistrum ochrostoma*. The alternative of doubt [Art. 70a(ii)] does not seem to apply, from Cernohorsky's positive statement of identification from Thiele's figures. Is not *Drupa cornus* also a *Drupella*?'

Ride: 'The application should also ask for the use of the plenary powers to set aside Article 70, because the solution proposed to the Commission is for none of the alternatives set out in that Article. Under Article 70 the alternatives would be a(i) *Drupa cornus* Roeding, a(ii) not applicable because the identity of the species is not in doubt, a(iii) *Ricinula siderea* Reeve.'

SUBSEQUENT HISTORY OF THE CASE

On 11 October 1971, shortly after the close of the voting period for V.P.(71)14, a letter was received from Dr Harald Rehder which clearly called for the case to be reopened. Dr Rehder said:

'1. To begin with, Cernohorsky's statement in the last sentence of paragraph 5 that *Purpura elata* Blainville, 1832 and *Ricinula spectrum* Reeve, 1846 are synonyms of *Drupa cornus* Roeding, 1798 is erroneous. *D. cornus* is restricted to the Indian Ocean and is orange within the aperture; *D. elata* (Blainville), with *spectrum* Reeve as a synonym, is found in the Pacific from Indonesia eastwards, and is white within the aperture. It is possible that *elata* should be considered a geographic race or subspecies of *cornus*.

'2. The species *Purpura elata* listed by Martens from Mahé, Seychelles, and cited by Thiele, 1925, p. 171, is undoubtedly *D. cornus* Roeding.

'3. *Purpura elata* and *Ricinula spectrum* are not synonyms of *Sistrum ochrostoma* Blainville as Tryon states. The latter is a distinct species whose radular characters have never been published. A radula slide in the U.S. National Museum, labelled as taken from *S. ochrostoma* from Hilo, Hawaii, shows a radula completely different from those figures by Thiele and on which *Drupella* is based. We do not have the specimen from which the radula was

taken, but other material of this species from Hilo is indistinguishable from specimens of *ochrostoma* from Polynesia and Melanesia.

'4. Thiele's figure of the radula of "*R. siderea* Reeve" agrees with that of *elata* Blainville (+ *spectrum* Reeve), but he does not state the provenance of his specimen.

'5. His figure of the radula of "*Drupella spectrum* (Reeve)" from the Red Sea is distinct from the previous figure. This may represent the radula of *D. cornus* Roeding.

'6. Because the only known radula preparation of *Sistrum ochrostoma* Blainville of which I am aware, from Hilo (mentioned above), differs so radically from that known for *Purpura elata* Blainville (+ *spectrum* Reeve), the radula that essentially characterises Thiele's genus *Drupella*, Dr Cernohorsky should be asked to change his application by requesting that *Purpura elata* Blainville, 1832 be selected as type species of *Drupella*. This is an equally widely distributed Pacific species. With this emendation I should gladly support the application.'

Dr Cernohorsky, after reading Dr Rehder's comment, presented a revised application which was sent to the printer on 13 February 1976 and published on 31 March 1977 in *Bull. zool. Nom.* vol. 33, pp. 190–191. Public notice of the possible use of the plenary powers was given in the same part of the *Bulletin* as well as to the statutory serials and to 15 other serials. The application was supported by Dr W.K. Emerson (*American Museum of Natural History, New York*). No adverse comment was received.

DECISION OF THE COMMISSION

On 20 August 1979 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1979) 12 for or against the proposals set out in *Bull. zool. Nom.* vol. 33, p. 191. At the close of the voting period on 20 November 1979 the state of the voting was as follows:

Affirmative Votes – twenty (20) received in the following order: Melville, Vokes, Holthuis, Alvarado, Mroczkowski, Willink, Trjapitzin, Tortonese, Sabrosky, Bayer, Hahn, Welch, Brinck, Bernardi, Habe, Dupuis, Corliss, Nye, Cogger, Heppell

Negative Votes – none (0).

Late affirmative votes were returned by Kraus, Halvorsen and Starobogatov. Ride was on leave of absence. No vote was returned by Binder.

Dr Sabrosky remarked on his voting paper: 'I do not disagree with the purpose of the designation, but it would have been more logical and in agreement with Article 70a(i) to have chosen *cornus*

Roeding rather than *elata* Blainville. Cernohorsky shows that the species misidentified by Thiele as *Ricinula siderea* and designated by von Ihering & Haas as type species of *Drupella* is *Drupa cornus* Roeding.'

ORIGINAL REFERENCES

The following are the original references for names placed on Official Lists by the ruling given in the present Opinion:

cornus, Drupa, Roeding, 1798, *Museum Boltenianum,* (2), p. 56

Drupella Thiele, 1925, *Wiss. Ergebnisse deutsch. Tiefsee-Expedition . . . 'Valdivia', 1898-1899,* Gastropoda, Theil II, p. 171.

CERTIFICATE

I certify that the votes cast on voting paper (79)12 were cast as set out above, that the proposal contained in that voting paper has been duly adopted under the plenary powers, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1154.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
14 January 1980

OPINION 1155
SAPERDA INORNATA SAY, 1824 (INSECTA: COLEOPTERA): DESIGNATION OF A NEOTYPE BY THE USE OF THE PLENARY POWERS

RULING – (1) Under the plenary powers it is hereby ruled that the nominal species *Saperda inornata* Say, 1824, is to be interpreted by reference to the following neotype:

American Museum of Natural History, New York, type number 147, bearing the labels 'Dovr. N. Co. Mass. 6-8-95' and '*Saperda concolor* var. *unicolor*, Type' [i.e. the type of *Saperda concolor unicolor* Felt & Joutel, 1904].

(2) The generic name *Saperda* Fabricius, 1775 (gender: feminine), type species, by subsequent designation by Curtis, 1829, *Cerambyx scalaris* Linnaeus, 1758, is hereby placed on the Official List of Generic Names in Zoology with the Name Number 2105.

(3) The following specific names are hereby placed on the Official List of Specific Names in Zoology with the Name Numbers specified:

(a) *inornata* Say, 1824, as published in the binomen *Saperda inornata*, and as interpreted by the neotype designated under the plenary powers in (1) above (Name Number 2709);

(b) *scalaris* Linnaeus, 1758, as published in the binomen *Cerambyx scalaris* (specific name of type species of *Saperda* Fabricius, 1775 (Name Number 2710).

HISTORY OF THE CASE Z.N.(S.) 1921

An application for the stabilisation of the name *Saperda inornata* Say, 1824, by the designation of a neotype under the plenary powers was first received from Dr John C. Nord (*Southeastern Forest Experiment Station, Athens, Georgia, U.S.A.*) and Dr Fred B. Knight (*Department of Forestry, University of Michigan, U.S.A.*) on 24 February 1970. It was sent to the printer on 10 March 1970 and published on 10 August 1970 in *Bull. zool. Nom.* vol. 27, pp. 123–128. Public notice of the possible use of the plenary powers in the case was given in the same part of the *Bulletin* as well as to the statutory serials and to seven entomological serials. No comment was received.

DECISION OF THE COMMISSION

On 1 June 1972 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1972)16 for or against the proposals set out in *Bull. zool. Nom.* vol. 27, p. 127. At the close of the voting period on 1 September 1972, the state of the voting was as follows:

Affirmative Votes – twenty (20) received in the following order: Vokes, Lemche, Mayr, Eisenmann, Habe, Bonnet, Simpson, Corliss, Heppell, Melville, Alvarado, Erben, Sabrosky, Tortonese, Nye, Bayer, Forest, Willink, Binder, Starobogatov

Negative Votes – three (3): Munroe, Holthuis, Ride.

Late affirmative votes were returned by Brinck, Jaczewski and Kraus.

The following comments were sent in by members of the Commission with their voting papers:

Munroe: 'I see no reason for the intervention of the Commission in the present case. The author can himself designate a neotype under the provisions of Article 75. The material relating to the generic name *Saperda* appears irrelevant to the application.'

Holthuis: 'I have no objection to the selection of a neotype for *Saperda inornata*, but see no good reason not to use a specimen from the type locality (Missouri).'

Ride: 'Neotype designations should be made subject to the conditions laid down in Article 75 and should not require the use of the plenary powers unless the applicant establishes a case that to adhere to those provisions would disturb stability or universality or cause confusion. The application does not meet the requirements of Article 75 and the applicants do not, in my opinion, make an adequate case for the use of the plenary powers.'

These comments caused the case to be delayed. The delay was prolonged because of the intervention of the Monaco (1972) International Congress of Zoology, with all its consequences for the Code and the status of the Commission, and because of changes in the personnel of the Commission's office. At length, in March 1974, the comments were relayed to Dr Nord. He replied in May 1976 to say that he had already published the designation, as the neotype of *Saperda inornata*, of the specimen proposed in his application to the Commission (*Michigan Entomologist*, vol. 4, 1971, pp. 33–38) on the assumption that the plenary powers need not be invoked. In July 1976 it was pointed out to him that the neotype, which came from Massachusetts, could only be designated by the Commission, using its plenary powers, because it did not come as nearly as practicable from the type locality (Art. 75c(6)). (It may be pointed out that Say's locality was not the present-day state of Missouri,

but the Missouri Territory of 1824. That corresponds roughly to Missouri, southwestern Iowa, Nebraska, eastern Colorado, Kansas and north central Oklahoma of today.) Dr Nord did not reply, and attempts to contact him through other North American coleopterists were unsuccessful.

Eventually, on 14 January 1980, a letter was received from Dr Nord in which he accepted the necessity for the use of the plenary powers, maintained his original decision to propose the type of *Saperda concolor* var. *unicolor* Felt & Joutel, 1904 for designation, and cited the following arguments in favour of his proposal:

'(1) The main purpose of the application was to stabilise the nomenclature. I think our article in *Michigan Entomologist* vol. 4, pp. 33–38 and the published application itself have set the record straight, have put forward a reasonable resolution of the problem, and have already stabilised the nomenclature.

'(2) The matter of which specimen to designate as the neotype is of secondary importance since we can never know what Say's specimen really looked like or where it came from. The type location lies somewhere within an area of 300 000 square miles (the former Missouri Territory) and there is no host record. Therefore, for practical purposes, we do not know where Say's specimen came from or its host species. To say that any specimen from that huge area is more likely to be like Say's specimen than one from outside the area is debatable. In fact, it is reasonable to assume that if one selects a specimen from within the area, the probability is high that one will choose as neotype a specimen that differs greatly from the type. The variation between *inornata* populations occurring on *Salix spp.* in different drainages across the Great Plains or on different mountains or other widely separated areas where aspen grows in the "Missouri Territory" may be more like that encountered in island populations where isolation has caused many distinct species and subspecies to evolve. I think there is a danger that specimens collected in the "Missouri Territory" are likely to be from populations that Mayr (*Animal species and evolution,* 1963) calls peripheral isolates. On p. 368 Mayr says: "Taxonomists have long been aware of the importance of these peripheral isolates and have pointed out, again and again, that major deviations from the 'type' of a species will most likely occur in such populations (Lorkovic 1943; Mayr & Vaurie 1948; Zimmermann 1950; and Mayr 1951, 1954)". He goes on: "They differ from the main body of the species population and from each other in numerous, often unique, and sometimes drastic morphological, physiological, behavioural and other characteristics". Say's type itself may have come from a peripheral isolate and might therefore be quite different from any

neotype selected. I therefore believe that the choice of a "Missouri Territory" specimen is not necessarily better than the one made, and there is a high probability that it would be worse. Since we cannot with confidence choose a specimen identical with Say's type, any choice has to be arbitrary. Since Felt & Joutel's specimen is the type of the eastern subspecies of this insect, is similar to most specimens occurring east of the Rocky Mountains, and is already housed and protected within a great institution, it is a good and reasonable choice as neotype.

'(3) To designate a different neotype under the provisions of Article 75c(6) would not therefore necessarily improve things; on the other hand, it would have the disadvantage of further complicating the literature.'

ACTION BY THE SECRETARY

On receipt of Dr Nord's letter quoted above, I considered that the comments raised by members of the Commission were sufficiently answered to allow the Commission's ruling to be promulgated.

Dr Munroe commented that the matter relating to the generic name *Saperda* was irrelevant to the application. That may be so, but the Commission nevertheless voted to place it on the Official List. I have completed this decision by placing the name of its type species on the Official List, having first verified the type-species designation referred to by the applicant.

ORIGINAL REFERENCES

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

inornata, Saperda, Say, 1824, *J. Acad. nat. Sci. Philadelphia.* vol. 3, no. 12, p. 407

Saperda Fabricius, 1775, *Syst. Ent.* p. 184

scalaris, Cerambyx, Linnaeus, 1758, *Syst. Nat.* ed. 10, vol. 1, p. 394.

The following is the original reference to a designation of type species accepted in the present Opinion: of *Cerambyx scalaris* Linnaeus, 1758, as type species of *Saperda* Fabricius, 1775, by Curtis, 1829, *British Entomology,* vol. 6, p. 275.

CERTIFICATE

I hereby certify that the votes cast on V.P.(72)16 were cast

as set out above, that the proposal contained in that voting paper has been duly adopted under the plenary powers, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1155.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
15 January 1980

OPINION 1156
TEREBRA VARIEGATA GRAY, 1834, (MOLLUSCA, GASTROPODA) CONSERVED BY THE USE OF THE PLENARY POWERS

RULING – (1) Under the plenary powers the specific name *africana* Griffith & Pidgeon, [late 1833–early 1834], as published in the binomen *Terebra africana,* is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

(2) The specific name *variegata* Gray, 25 November 1834, as published in the binomen *Terebra variegata,* is hereby placed on the Official List of Specific Names in Zoology with the Name Number 2711.

(3) The specific name *africana* Griffith & Pidgeon, [late 1833–early 1834], as published in the binomen *Terebra africana,* and as suppressed under the plenary powers in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology with the Name Number 1064.

HISTORY OF THE CASE Z.N.(S.)1927

An application for the conservation of *Terebra variegata* Gray, 1834, was first received from Dr Twila Bratcher and Dr Robert Burch (*Los Angeles County Museum of Natural History*) on 13 April 1970. It was sent to the printer on 1 July 1970 and published on 29 March 1971 in *Bull. zool. Nom.* vol. 27, pp. 255–256. Public notice of the possible use of the plenary powers in the case was given in the same part of the *Bulletin* as well as to the statutory serials and to two malacological serials. The application was supported by Dr Harald Rehder (*U.S. National Museum*) and Dr Myra Keen (*Stanford University, California*). No adverse comment was received.

The date of publication of *Terebra africana* was important in this case. Cowan, 1969, *J. Soc. Biblphy nat. Hist.* vol. 5, pp. 137–140 gave the date of the corresponding part – part (39) – of Griffith & Pidgeon's work as [March 1834]. Before the case was presented for a vote, Lt-Col. Cowan was asked if he had any further information on the date of publication of that part. He replied that the part could only be dated [late 1833–early 1834], certainly before November 1834.

DECISION OF THE COMMISSION

On 20 August 1979 the members of the Commission were invited to vote under the Three-Month Rule in Voting Paper (1979) 14 for or against the proposals set out in *Bull. zool. Nom.* vol. 27, p. 255. At the close of the voting period on 20 November 1979 the state of the voting was as follows:

Affirmative Votes – twenty (20) received in the following order: Melville, Holthuis, Vokes, Alvarado, Mroczkowski, Willink, Trjapitzin, Tortonese, Sabrosky, Bayer, Hahn, Welch, Brinck, Bernardi, Habe, Dupuis, Corliss, Nye, Cogger, Heppell

Negative Votes – none (0).

Late affirmative votes were sent in by Kraus, Halvorsen and Starobogatov. Ride was on leave of absence. No vote was returned by Binder.

ORIGINAL REFERENCES

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

africana, Terebra, Griffith & Pidgeon, [late 1833 – early 1834], Mollusca and Radiata, *in The Animal Kingdom . . . by Cuvier,* vol. 12, part (39), explanation of plate M23, fig. 5

variegata, Terebra Gray, Nov. 25 1834, *Proc. zool. Soc. London* for 1834, p. 61.

CERTIFICATE

I hereby certify that the votes cast on V.P.(79)14 were cast as set out above, that the proposal contained in that voting paper has been duly adopted under the plenary powers, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1156.

R. V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
15 January 1980

OPINION 1157
SPHEX VIATICA [*SIC*] LINNAEUS, 1758 (INSECTA, HYMENOPTERA): DESIGNATION OF LECTOTYPE

RULING – (1) It is hereby ruled that the valid lectotype of the nominal species *Sphex viatica* [*sic*] Linnaeus, 1758, is the specimen so designated by van der Vecht, 1958, *Entomol. Ber.* vol. 18, p. 47.

(2) The specific name *viaticus* Linnaeus, 1758, as published in the binomen *Sphex viatica* [*sic*], and as defined by the lectotype accepted in (1) above, is hereby placed on the Official List of Specific Names in Zoology with the Name Number 2712.

HISTORY OF THE CASE Z.N.(S.)2061

On 1 February 1974 a paper was received from Dr C.W. Sabrosky asking the Commission to answer two general questions and also to decide which of two possible specimens – one designated by Richards, 1935, and the other by van der Vecht, 1958 – is the valid lectotype of *Sphex viaticus* Linnaeus, 1758. (That species provided an example of the two general questions.) The paper was sent to the printer on 5 April 1974 and published on 20 September 1974 in *Bull. zool. Nom.* vol. 31, pp. 159–163. No use of the plenary powers was involved. The late Dr. Lemche criticised the application for not offering clear alternatives for a vote by the Commission; Dr Sabrosky agreed that the members of the Commission should be asked to vote either for the specimen designated by Richards, or for the specimen designated by van der Vecht. No other comment was received.

DECISION OF THE COMMISSION

On 20 August 1979 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1979)15 either for the specimen designated by Richards or for the specimen designated by van der Vecht as lectotype of *Sphex viaticus*. At the close of the voting period on 20 November 1979 the state of the voting was as follows:

for the specimen designated by Richards - Habe

for the specimen designated by van der Vecht - eighteen (18) votes, received in the following order: Melville, Holthuis, Vokes, Alvarado, Mroczkowski, Willink, Trjapitzin, Tortonese, Sabrosky,

Hahn, Welch, Brinck, Bernardi, Corliss, Nye, Heppell, Cogger, Bayer.

Dupuis abstained from voting. Late votes for the van der Vecht specimen were received from Kraus, Halvorsen and Starobogatov. Ride was on leave of absence. No vote was returned by Binder.

The following comments were sent in by members of the Commission with their votes:

Sabrosky: 'Day, 1979, *Bull. brit. Mus. (nat. Hist.)*, Entomol., vol. 38, p. 16, has reviewed the complex history of *Sphex viaticus*.'

Hahn: 'I vote for designation by van der Vecht, 1958, for the following reasons: (1) It is apparently not certain that the specimen designated by Richards, 1935, was a member of Linnaeus's type series; (2) In Dr Sabrosky's footnote, *Bull. zool. Nom.* vol. 31, p. 161, it is clearly stated that it was not Professor Richards's intention to designate a lectotype; (3) in contrast to that specimen, that of van der Vecht undoubtedly belongs to the type series of *viaticus*; (4) Linnaeus, 1761, and Villers, 1789, have not designated a lectotype, as far as I can see from Dr Sabrosky's text; Professor Richards unequivocally says that he did not do it in 1935. Therefore, under Article 74 of the Code, van der Vecht, 1958 was the first author who has designated a valid lectotype, in the sentence quoted by Dr Sabrosky in *Bull. zool. Nom.* vol. 31, p. 160, lines 6–7.'

Brinck: 'Formally, this is a rather simple case: (1) *viaticus* Linnaeus was a composite species, and (2) van der Vecht validly designated a lectotype. I have voted accordingly. But from a taxonomic point of view I hope this will not have disastrous consequences, in changing the name for a very well-known taxon. Compare Lindroth's opinion that Linnean names that denote compsite species and have two or more meanings should be suppressed or synonymised.'

Dupuis: 'Je ne suis pas suffisamment informé pour pouvoir voter. Personne ne semble s'être soucié des conséquences des choix proposés (1) sur l'acception des noms génériques typifiés par *viaticus*, (2) sur les usages courants.'

Cogger: 'I do not believe that Richards's 1935 citation of an extant specimen as the type of *Sphex viaticus* Linnaeus, 1758, can constitute a lectotype designation. Such a loose interpretation of Article 74a could have quite appalling consequences in zoological nomenclature.'

ORIGINAL REFERENCES

The original reference for a name placed on an Official List by the ruling given in the present Opinion is:

viatica [*sic*], *Sphex*, Linnaeus, 1758, *Syst. Nat.*, ed. 10, vol. 1, p. 570.

The reference to a lectotype designation accepted in the present Opinion is: for *Sphex viaticus* Linnaeus, 1758, by van der Vecht, 1958, *Entomol. Berichten*, vol. 18, p. 47.

CERTIFICATE

I hereby certify that the votes cast on V.P.(79)15 were cast as set out above, that the proposal contained in that voting paper has been duly adopted, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1157.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
15 January 1980

OPINION 1158
LITOMOSA VITEAE RULED UNDER THE PLENARY POWERS TO BE THE CORRECT ORIGINAL SPELLING OF *LITOMOSA WITE* KREPKOGORSKAYA, 1933 (NEMATODA)

RULING – (1) Under the plenary powers:

(a) the original spelling *wite* Krepkogorskaya, 1933, as published in the binomen *Litomosa wite*, is hereby suppressed;

(b) the spelling *viteae* is hereby ruled to be the correct original spelling of that name.

(2) The specific name *viteae* Krepkogorskaya, 1933, in the binomen *Litomosa viteae*, as validated under the plenary powers in (1) (b) above, is hereby placed on the Official List of Specific Names in Zoology with the Name Number 2713.

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology with the Name Numbers specified:

(a) *wite* Krepkogorskaya, 1933, as published in the binomen *Litomosa wite*, and as suppressed under the plenary powers in (1) (a) above (Name Number 1065);

(b) *witei* McIntosh & McIntosh, 1935, as published in the binomen *Litosoma witei* (an unjustified emendation of *Litomosa viteae* Krepkogorskaya, 1933) (Name Number 1066);

(c) *vitei* Sassuchin, Tiflow & Schulz, 1935, as published in the binomen *Litosoma vitei* (an incorrect subsequent spelling of *Litomosa viteae* Krepkogorskaya, 1933) (Name Number 1067);

(d) *vite* Skrjabin & Shikhobalova, 1945, as published in the binomen *Litosoma vite* (an unjustified emendation of *Litomosa viteae* Krepkogorskaya, 1933) (Name Number 1068).

HISTORY OF THE CASE Z.N.(S.)2203

An application on behalf of the World Health Organisation for a ruling on the correct spelling of the filarian worm generally known as *Dipetalonema viteae* was first received from Dr B.O.L. Duke (*Chief, Filarial Infections Division of Malaria and Other Parasitic Diseases, WHO, Geneva*) on 26 May 1976. After some

correspondence, the application was signed by Dr Duke and five of his colleagues and submitted formally on 28 October 1976. The urgency of the case was stressed because of the prevailing confusion in the spelling of the name of this species, which is widely used in medical parasitology for screening filaricidal drugs. An agreed text was sent to the printer on 16 February 1978 and published on 31 July 1978 in *Bull. zool. Nom.* vol. 35, pp. 51–54. Public notice of the possible use of the plenary powers was given in the same part of the *Bulletin* as well as to the statutory serials and to eight other serials. No comment was received.

DECISION OF THE COMMISSION

On 20 August 1979 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1979) 16 for or against the proposals set out in *Bull. zool. Nom.* vol. 35, pp. 52–53. At the close of the voting period on 20 November 1979 the state of the voting was as follows:

Affirmative Votes – fifteen (15) received in the following order: Melville, Vokes, Alvarado, Mroczkowski, Willink, Trjapitzin, Tortonese, Welch, Brinck, Bernardi, Habe, Dupuis, Corliss, Nye, Cogger (proposals (1) and (2) only)

Negative Votes – five (5): Holthuis, Sabrosky, Hahn, Heppell, Bayer. A late negative vote was received from Kraus and late affirmative votes from Halvorsen and Starobogatov. Ride was on leave of absence. No vote was returned by Binder.

The following comments were sent in by members of the Commission with their voting papers:

Holthuis: 'The arguments against using the original spelling for the specific name seem very feeble. It seems best to stick to the original spelling, unless the Commission wants to be swamped with similar requests'.

Sabrosky: 'Most authors seem not to have realised that *wite*, after Dr Wite, is a noun in apposition, Article 11g(i)(2), and does not need to be altered to the genitive case'.

Hahn: 'I can see no reason to change the original spelling. That name can be understood to be a noun in apposition. To change the "*w*" to a "*v*" is an unjustified emendation. Authors are obliged neither to use the genitive form of a personal name, nor to use only one transliteration from the Cyrillic alphabet'.

Bernardi: 'Il n'y a pas lieu d'hésiter entre un point mineur d'orthographe originale et l'intérêt d'une nomenclature stable pour une espèce d'importance médicale.'

Cogger: 'While agreeing with the intent of the application, I cannot agree with the solution proposed, which seems unnecessarily complex. Certainly I object to unjustified emendations being placed on the Official Index when it does not seem necessary to do so. However, I would be prepared to vote for parts (1) and (2) of the application if the majority of the members of the Commission favoured that course. But I vote against part (3) of the application.'

Heppell: 'The applicants have demonstrated that there has been no consensus of orthography, and the original spelling is evidently intentional and acceptable. The important matter is for the Commission to stabilise the spelling one way or the other.'

Bayer: 'I see no merit in the request to suppress this legally established name, which was proposed in the form of a noun in apposition and spelled in accordance with the surname of the person honoured as given in the original German text; the Cyrillic spelling of the lady's name was not given. There was no legal basis for correcting "*w*" to "*v*" or for altering the name to a genitive form, masculine or feminine. I oppose the request to suppress a name, legally proposed in good faith, because of variations that have resulted from subsequent tampering. I may also point out that the original combination published by Krepkogorskaya in 1933 was *Litomosa wite,* not *Litosoma,* and the spellings cited in proposals (1)a, (2) and (3)a–d are wrong.' [This has been attended to in the present ruling. R.V.M.]

ORIGINAL REFERENCES

The following are the original references to names placed on an Official List and Official Index by the ruling given in the present Opinion:

vite, Litosoma, Skrjabin & Shikhobalova, 1948, *Opredelitel' parazi-ticheskikh nematod, spiruraty i filyareti,* Moscow, p. 227

viteae, Dipetalonema, Bain, 1967, *Ann. Parasitol. hum. comp.* vol. 42, p. 212

vitei, Litosoma, Sassuchin, Tiflow & Schulz, 1935, *Zeitschr. Parasitenk.,* vol. 7, p. 636

wite, Litomosa, Krepkogorskaya, 1933, *Zool. Anzeiger,* vol. 102, p. 88

witei, Litosoma, McIntosh & McIntosh, 1935, *Proc. helminthol. Soc. Washington* vol. 2, p. 62.

CERTIFICATE

I hereby certify that the votes cast on V.P.(79)16 were cast as set out above, that the proposal contained in that voting paper has been duly adopted under the plenary powers, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1158.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
15 January 1980

OPINION 1159
LITTORINA (MOLLUSCA, GASTROPODA): AUTHOR AND DATE OF THIS GENERIC NAME, AND TYPE SPECIES OF THIS NOMINAL GENUS DETERMINED BY USE OF THE PLENARY POWERS

RULING – (1) Under the plenary powers it is hereby ruled that:

(a) the generic name *Littorina* was made available by Férussac, 1822;

(b) all designations of type species for the nominal genus *Littorina* Férussac, 1822, prior to the designation of *Turbo littoreus,* Linnaeus, 1758, by Anton, (1838) are hereby set aside.

(2) The generic name *Littorina* Férussac, 1822 (gender: feminine), type species, by subsequent designation by Anton, (1838), *Turbo littoreus* Linnaeus, 1758, is hereby placed on the Official List of Generic Names in Zoology with the Name Number 2106.

(3) The specific name *littoreus* Linnaeus, 1758, as published in the binomen *Turbo littoreus* (specific name of type species of *Littorina* Férussac, 1822) is hereby placed on the Official List of Specific Names in Zoology with the Name Number 2714.

HISTORY OF THE CASE Z.N.(S.)1901

An application for the use of the plenary powers to designate a type species for *Littorina* Férussac, 1822, was first received from Dr D. Kadolsky (*Geological and Palaeontological Institute, University of Bonn, BRD*) on 2 September 1969. After some correspondence a text was agreed on 18 November 1969. It was sent to the printer on 18 December 1969 and published on 5 June 1970 in *Bull. zool. Nom.* vol. 27, pp. 51–54. No use of the plenary powers was requested.

The application was supported by Dr J. Rosewater (*U.S. National Museum)* but was criticised by Dr Holthuis and Mr Heppell. Mr Heppell's comment, which was published on 3 December 1970 in *Bull. zool. Nom.* vol. 30, pp. 131–132, contained proposals for the use of the plenary powers. Public notice of the possible use of those powers in the case was accordingly given in the same part of the *Bulletin* as well as to the statutory serials and to two malacological serials.

Dr Holthuis's comment, and further criticism by Dr W.O.

Cernohorsky, was published in *Bull. zool. Nom.* vol. 27, p. 210. A further comment by Mr Heppell was published in vol. 28, p. 76.

DECISION OF THE COMMISSION

On 20 August 1979 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1979)13 on the proposals set out in the following note that accompanied the voting paper:

AUTHORSHIP AND DATE OF THE GENERIC NAME *LITTORINA* (GASTROPODA) AND FIXATION OF THE TYPE SPECIES OF THAT NOMINAL GENUS NOTE TO ACCOMPANY V.P.(79)13

In his original application (*Bull. zool. Nom.* vol. 27: 51–54, June 1970), Dr Kadolsky asked that the generic name *Littorina* Férussac, 1822 be placed on the Official List with *Turbo littoreus* Linnaeus, 1758 as its type species by designation by Blainville, 1828. Subsequent comments by malacologists support these aims but dispute Dr Kadolsky's proposed means. Are the plenary powers to be used or not, and if they are, to what extent? Dr Rosewater (*U.S. National Museum*) alone agreed with Dr Kadolsky that his aims could be achieved without the use of the plenary powers.

Mr Heppell (vol. 27: 131–132) said: 'Férussac certainly leaves us in no doubt as to what he understood by his new subgenus' [of *Turbo* Linnaeus, 1758] but questioned whether it satisfied the criteria of availability. In my view, it does not: on: xi it appears in the French vernacular 'littorine' not directly accompanied by a description, definition, or indication; on : xxiv it appears as a bare name, *Littorina*. Nevertheless, there is enough information associated with the name in discussions of other names for the Commission to rule it available under the plenary powers. There are, however, no species distinctly referred to this genus in this work and its type species under the Code is *Littorina basterotii* Payraudeau, 1826, by subsequent monotypy, generally considered a junior synonym of *Turbo neritoides* Linnaeus, 1758. Hence, *T. littoreus* Linnaeus, 1758, can only be fixed as type species of *Littorina* by the use of the plenary powers.

These two conclusions are implicitly accepted by Dr W.O. Cernohorsky and Dr L.B. Holthuis (vol. 27: 210).

In a further comment (vol. 28: 76) Mr Heppell noted that *Turbo littoreus* Linnaeus, 1758, had been designated as type

species of *Littorina* not by Blainville, 1828 (who spoke only of 'Littorine') but by Anton, 1839, *Verzeichniss der Conchylien* [the date of that work has been shown to be (1838) by Kadolsky, 1971, *Arch. Molluskenk,* vol. 101: 193]. Mr Heppell has asked that the last sentence of this comment be replaced by the following: 'The availability of *Neritoides* Meuschen has been demonstrated by Kadolsky, *Arch. Molluskenk.* vol. 101: 192–193. *Neritrema* Récluz, 1869 (type species, by subsequent designation by Dall, 1909, *Turbo obtusatus* L., 1758) may be used for *Neritoides* Brown.' This, however, bears only on a collateral point, not on the central issue.

A correct presentation of the requests put forward by Dr Kadolsky as criticised by Mr Heppell is, therefore, that the Commission should:

(1) use its plenary powers
  (a) to rule that the generic name *Littorina* was made available by Férussac, 1822;
  (b) to set aside all designations of type species for *Littorina* Férussac, 1822, prior to the designation of *Turbo littoreus* Linnaeus, 1758 by Anton, (1838);
(2) place the generic name *Littorina* Férussac, 1822 (gender: feminine), type species, by subsequent designation by Anton, (1838), *Turbo littoreus* Linnaeus, 1758, on the Official List of Generic Names in Zoology;
(3) place the specific name *littoreus* Linnaeus, 1758, as published in the binomen *Turbo littoreus* (specific name of type species of *Littorina* Férussac, 1822) on the Official List of Specific Names in Zoology.

At the close of the voting period on 20 November 1979 the state of the voting on V.P.(79)13 was as follows:

Affirmative Votes – eighteen (18) received in the following order: Melville, Holthuis, Vokes, Alvarado, Mroczkowski, Willink, Trjapitzin, Tortonese, Sabrosky, Bayer, Hahn, Welch, Brinck, Bernardi, Habe, Corliss, Nye, Heppell

Negative votes – none (0).

Dupuis abstained from voting. Late affirmative votes were returned by Kraus and Halvorsen and a late negative vote by Starobogatov. Ride was on leave of absence. No votes were returned by Binder and Cogger.

The following comments were sent in by members of the Commission with their voting papers:

Dupuis: 'Je vote contre le "wording" proposé. D'abord parce qu'il y a un lapsus (*Paludina* au lieu de *Littorina*) [a number of members drew attention to this error in the note accompanying

the voting paper; it has been corrected in the Ruling. R.V.M.]. Ensuite, si l'on admet que *Littorina* est available, c'est bien parce que l'on admet que "littorine" (fr.) = *Littorina* (latin). Pourquoi ne pas admettre dès lors (en vertu des pleins pouvoirs, y compris la faculté de discernement) la désignation par Blainville du type de "littorine" (fr.) comme valable pour *Littorina* (latin)? Toute procédure casuiste pour attribuer à des successeurs les mérites d'un auteur est d'une mesquinerie qui porte le plus grand préjudice à la Commission.'

Starobogatov (with late negative vote): 'We must not change the main principles of the Code. In this case it is evident that *Littorina neritoides* and *Algaroda littorea* are in distinct genera.'

ORIGINAL REFERENCES

The following are the original references for names placed on Official Lists by the ruling given in the present Opinion:

littoreus, Turbo, Linnaeus, 1758, *Syst. Nat.*, ed. 10, vol. 1, p. 761

Littorina Férussac, 1822, *Tabl. syst. anim. moll.*, pp. XI (16.2. 1822), XXIV (13.4.1822) fide Kennard, 1942, *Proc. malac. Soc. London*, vol. 25, pp. 12–17, 105–118.

The following is the original reference to a subsequent designation of type species accepted in the ruling given in the present Opinion: of *Turbo littoreus* Linnaeus, 1758, as type species of *Littorina* Férussac, 1822, by Anton, (1838), *Verzeichniss der Conchylien*, p. 52.

CERTIFICATE

I hereby certify that the votes cast on V.P.(79)13 were cast as set out above, that the proposal contained in that voting paper has been duly adopted under the plenary powers, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1159.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
21 January 1980

DIRECTION 108
CORRECTION OF NAME NO 2087 IN THE OFFICIAL LIST OF SPECIFIC NAMES IN ZOOLOGY: FOR *MUREX STRIATA* GMELIN, 1791, READ *VOLUTA STRIATA* GMELIN, 1791

RULING – It is hereby directed that that part of the Ruling in Opinion 740 that concerns Name Number 2087 in the Official List of Specific Names in Zoology is to be amended as follows:

For *striata, Murex,* Gmelin, 1791, read *striata, Voluta,* Gmelin, 1791.

HISTORY OF THE CASE Z.N.(S.) 1521

In January 1975 Dr Walter Cernohorsky (*Auckland Museum, New Zealand*) drew attention to an error in Opinion 740 whereby the name of a species of MURICIDAE had been placed on the Official List instead of the name of a species of VOLUTIDAE (Gastropoda): *Murex striatus* Gmelin, 1791, *Syst. Nat.* ed. 13, vol. 1, p. 3530 (wrongly spelt *striata*) in error for *Voluta striata* Gmelin, 1791, *Syst. Nat.* ed. 13, vol. 1, p. 3455. Dr Harald Rehder, the original applicant in the case that resulted in Opinion 740 was told, and immediately confirmed Dr Cernohorsky's impression. He prepared a note which was sent to the printer on 16 May 1975 and published on 22 September 1975 in *Bull. zool. Nom.* vol. 32, p. 143. No use of the plenary powers was involved. No comments were received.

DECISION OF THE COMMISSION

On 20 August 1979 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (1979)8 for or against Dr Rehder's proposal. At the close of the voting period on 20 November 1979 the state of the voting was as follows:

Affirmative Votes – nineteen (19) received in the following order: Melville, Vokes, Holthuis, Alvarado, Hahn, Mroczkowski, Willink, Trjapitzin, Tortonese, Sabrosky, Welch, Brinck, Bernardi, Bayer, Habe, Corliss, Nye, Cogger, Heppell

Negative Votes – none (0).

Dupuis voted to postpone the matter (his comment is quoted below). Late affirmative votes were sent in by Kraus, Halvorsen and Starobogatov. Ride was on leave of absence. No vote was returned by Binder.

The following comments were returned by members of the Commission with their voting papers:

Dupuis: 'Si l'Opinion 740, qui pèche par un point mineur, doit être amendée, il est évident que l'Opinion 1029, qui pèche par plusieurs points de fait, doit l'être aussi. Donc, si les remarques Dupuis–Lescure du 21 mai 1976 concernant l'Opinion 1029 sont publiées avant ou en même temps que l'amendement ici proposé pour l'Opinion 740, je vote pour cet amendement. Sinon, je vote l'ajournement jusqu'à ce que la Commission ait été également et publiquement saisie des amendements factuels proposés à ses Opinions.' [Letters from the Secretary to Professor Dupuis dated 1 June 1976 and 23 May 1977 and discussing Opinion 1029 have not yet been answered. R.V.M.]

Heppell: 'This is a matter of fact, not opinion. The Commission should not have to be asked whether or not to correct an obvious error in the factual component of a Ruling.'

ORIGINAL REFERENCE

The original reference to the correct name now entered on an Official List by the present Ruling is:
striata, Voluta, Gmelin, 1791, *Syst. Nat.* ed. 13, vol. 1, p. 3455.

CERTIFICATE

I certify that the votes cast on V.P.(79)8 were cast as set out above, that the proposal contained in that voting paper has been duly adopted, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Direction 108.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
4 January 1980

MACROCEPHALITES (SUTNER MS) ZITTEL, 1884 AND *AMMONITES MACROCEPHALUS* SCHLOTHEIM, 1813 (CEPHALOPODA: AMMONOIDEA): REVIVED PROPOSALS. Z.N.(S.)401

(see vol. 2, pp. 170–179)

by J.H. Callomon (*University College, London*)

Introduction

The interpretation of the stratigraphically and zoologically important genus *Macrocephalites* Zittel, 1884 and its type species have been uncertain because the failure of the founders from the early days of palaeontology to designate types has resulted in much serious confusion. There have been three modern attempts to sort this problem out: by Buckman, 1922, *Type Ammonites,* vol. 4, pls. 334A, B and legends; 1929, *Canada Dept Mines, Bull. nat. Mus. Canada* no. 58 (*Geol. Ser.* no. 50), pp. 1–5, 8; Arkell, 1951, *Bull. zool. Nom.* vol. 2, p. 170; and Callomon, 1971, *Palaeontol.*, vol. 14, p. 114. The last of these provided all the necessary solutions based on new information and fully in accord with the International Code of Zoological Nomenclature (1964) then and now in force. Nevertheless, some authors continue to follow different interpretations in important revisions: e.g. Maubeuge, 1975, *Tätigkeitsber. naturf. Ges. Baselld* vol. 29, p. 126; Thierry, 1978, *Mêm. géol. Univ. Dijon,* vol. 4. These are based largely on a misconception arising out of the proposals by Arkell, 1951, *op. cit.* to the Commission but never subsequently acted upon: contrary to the belief expressed by Maubeuge and Thierry, the Commission has given no Ruling on this, and no Opinion has so far been published. This is fortunate, because not only were some of Arkell's proposals themselves based on an erroneous interpretation of the previous work by Buckman, 1922, *op. cit.;* but a specimen was put forward as type which is itself lost. Arkell's proposals still formally stand before the Commission and add to the confusion.

The Commission is therefore asked to resolve this uncertainty by adding to the Official Lists of Generic and Specific Names in Zoology the names *Macrocephalites* Zittel, 1884 and *Ammonites macrocephalus* Schlotheim, 1813, defined by their types as described by Callomon, 1971, *op. cit.* The detailed evidence and exhaustive arguments presented there may be summarized as follows.

THE TYPE SPECIES OF *MACROCEPHALITES* ZITTEL, 1884.

2. The genus was founded for some 40 species, of which seven were cited by name; there is no type species by original designation.

3. The first author validly to select a type species was Lemoine, 1910, *Ann. Paleont.* vol. 5, p. 151(15) in a major revision of the genus: . . . . "le génotype est *Macr. macrocephalus* Schlot.; . . . .". A subsequent attempt by Buckman, 1922; 1929, p. 2, *op. cit.*, to designate another species, namely *Macrocephalites macrocephalus* Zittel 1884 *non* Schlotheim, may therefore be dismissed, and is in any case invalid because it confused a specific taxon with a nominal species as type of a genus.

4. Lemoine's designation therefore stands, and the only residual technical uncertainty relates to the date of availability of Schlotheim's name. There are two possibilities: 1813, Beiträge zur Naturgeschichte der Versteinerungen in geognosticher Hinsicht, in Leonhard, C.G.: *Taschenbuch für die gesamte Mineralogie,* vol. 7, p. 70; and 1820, *Die Petrefactenkunde auf ihrem jetzigen Standpunkt durch die Beschreibung einer Sammlung versteinerten und fossiler Überreste des Thier- und Pflanzenreichs der Vorwelt erläutert* (Gotha), p. 70. However, the earlier of these has never been seriously questioned by any revising author in the last 150 years.

THE TYPE SPECIMEN OF *AMMONITES MACROCEPHALUS* SCHLOTHEIM, 1813.

5. The original description of this species referred to a single specimen figured in the literature, by Baier, 1757, *Joannis Jacobi Baieri Monumenta Rerum Petrificatarum Praecipia Orictographiae Noricae,* Nüremburg, pl. 12, fig. 8; refigured by Callomon, 1971, p. 118, text-fig. 1, *op. cit.* Circumstantial evidence in the original publication and subsequent new evidence obtained in the first modern attempt actually to consult Schlotheim's collection (Callomon, 1971) shows, however, that the type series was more extensive and included at least one other specimen in Schlotheim's collection (Art. 72b). The specimen depicted by Baier was therefore at best a syntype, and there was no holotype. Even if subsequent references to Baier's specimen as "holotype" or simply "type", e.g. by Blake, 1905, *The Fauna of the Cornbrash,* Monogr. Palaeontogr. Soc. London, p. 43, were accepted as technically a lectotype designation, the problem would not be resolved, for (i) Baier's specimen is lost; and (ii) his figure is only barely interpret-

able, in the sense that all that can be deduced from it is the considerable number of species the specimen it depicts did not belong to, leaving the almost equally considerable number of other species now widely recognizable as distinct that it well could have belonged to.

6. Arising from these uncertainties, and despite some claims to the contrary, it was shown by Callomon that no alternative consensus of interpretation based on some other specimen or figure had grown in the literature subsequently, most authors circumventing the problem by simply avoiding the use of the name *macrocephalus* altogether, other than in a very broad or general sense.

7. The one serious attempt to provide such an alternative was by Buckman, 1922, 1929, *op. cit.*, who took the view that Zittel's inclusion in his list of species belonging to his new genus *Macrocephalites* of *Ammonites macrocephalus* referred to a distinct species, *M. macrocephalus* Zittel, 1884, non *Amm. macrocephalus* Schlotheim, 1813, i.e. a taxon whose name was homonymous with that of Schlotheim's taxon when the latter was transferred to the genus *Macrocephalites,* but not synonymous. Despite Lemoine's previous selection (1910) of *Amm. macrocephalus* Schlotheim of which Buckman may of course have been unaware, he sought then to select Zittel's species as type species ('genotype'), and renamed it *Macrocephalites verus* to lift the homonymy; and he sought to designate the specimen figured in a drawing by Zittel, 1884, Handbuch der Palaeontologie, I, 2. Band, fig. 655, reproduced by Callomon 1971, text-fig. 3 – 'Oppel-Zittel specimen', as holotype. He therefore figured a specimen ('Oppel-Buckman specimen') that had been sent to him at his request from the Oppel collection in Munich by Dacqué as allegedly the specimen on which Zittel's figure had been based, and labelled it quite explicitly as holotype of *M. verus* Buckman, 1922. It transpired subsequently that he had been sent the wrong specimen (Buckman, 1929, *op. cit.*, p. 8, written in 1924), and that the holotype of *M. verus* Buckman was not the specimen figured by Zittel. Of this Arkell was unaware in his application of 1951 to the Commission to have the (lost) Oppel-Buckman specimen made type of *M. macrocephalus* under its Plenary Powers. Thus, these attempts to shift the interpretation of *M. macrocephalus* on to the specimen figured by Zittel led to good new figures of a poor specimen of no status since lost, and added nothing to the original figure of dubious quality and unknown magnification of a specimen of unknown origin which was in fact not then redescribed until much later, in 1971.

8. There are thus four specimens as conceivable candidates for the title of type of *Amm. macrocephalus*:

A. Baier's specimen. Only figure barely interpretable; syntype or lectotype according to the strictness of interpretation of Blake's wording (see below); lost.

B. Schlotheim's specimen figured and fully described by Callomon, 1971, *op. cit.*, of excellent quality, and conforming quite well with the figure of Baier's specimen, as far as this is possible; syntype if in the collection in 1813 (most probable, and unlikely to be refutable), metatype (informal secondary type, a specimen identified as belonging to a species by its author but outside the original type series) if added later.

C. Oppel-Zittel specimen. Excellent quality, but not properly figured or described until 1971; substantially different from both the Baier specimen A and the Schlotheim specimen B; not a syntype, nor a metatype, nor a topotype, nor a chorotype (same stratigraphical level but not exactly the same locality as a primary type).

D. Oppel-Buckman specimen, holotype of *Macrocephalites verus* Buckman. Poor quality; well figured by Buckman in mistake for C above; proposed for designation as type under the plenary powers by Arkell in the same mistaken belief; lacking all status as in the case of C above; lost.

9. Following the arguments outlined above, the Schlotheim specimen was therefore chosen as the type specimen by Callomon, 1971, p. 120.

The only residual decision to be made was whether to regard Blake's wording (1905, *op. cit.*) as constituting a valid lectotype designation of Baier's lost specimen. He wrote: "*Type.* — Schlotheim, having given no description of the species as distinct from the genus, and Baier, to whom he refers as above, having also left the shell nameless and without description, we are thrown back on the figure he gives as representing the shell called by Schlotheim *Am. macrocephalus* . . . This, therefore, must be taken as the type of *Macrocephalites macrocephalus.*" The word "type" could be construed to mean holotype or lectotype, but as the sense of the whole statement is more to fix a basis for interpreting the taxon rather than to show that the basis had necessarily to be a single specimen, the sense of lectotype was chosen. Loss of Baier's specimen means therefore loss of the lectotype, and choice of Schlotheim's specimen, subsequently found originally to have been a syntype, to replace it makes it a neotype, fully in accord with Art. 75 of the Code, and calling for no action by the Commission under its Plenary Powers.

10. The Commission is therefore asked:

(1) to place the generic name *Macrocephalites* Zittel, 1884 (gender: masculine), type species *Ammonites*

macrocephalus, Schlotheim, 1813 by subsequent designation by Lemoine, 1910, on the Official List of Generic Names in Zoology;

(2) to place the specific name *macrocephalus* Schlotheim, 1813 (as published in the binomen *Ammonites macrocephalus*) (specific name of type species of *Macrocephalites* Zittel, 1884) on the Official List of Specific Names in Zoology, the name being based on the specimen described, figured and designated neotype by Callomon (1971, *op. cit.*, plates 15, 16, Schlotheim collection, Humboldt University, Berlin. Quenstedt catalogue No. A26).

NETTASTOMELLA CARPENTER, 1865 (MOLLUSCA: BIVALVIA: PHOLADIDAE): PROPOSED CONSERVATION UNDER THE PLENARY POWERS. Z.N.(S.)1054

By Eugene V. Coan (*Department of Geology, California Academy of Sciences, Golden Gate Park, San Francisco, California 94118, U.S.A.*) and George L. Kennedy (*U.S. Geological Survey, Menlo Park, California 94025, U.S.A.*)

The molluscan bivalve genus *Netastoma* was proposed by Carpenter in 1864 (529, 540, 605, 635, 637, 684; [1872 reprint, 15, 26, 91, 121, 123, 170]) with "*Netastoma Darwinii* Sby." [*Pholas darwinii* G.B. Sowerby, II, 1849, pp. 490, pl. 107, figs. 76–77; type locality "Chiloe" (Island, Chile)] as its type species (by original monotypy).

2. In proposing *Netastoma,* Carpenter had before him mostly (or perhaps only) specimens of the northeastern Pacific *N. rostrata* (Valenciennes) [*Pholas rostrata* Valenciennes, *in* Du Petit-Thouars, 1846, pl. 24, figs. 4, 4a], a taxon that he considered "is probably = *Netastoma Darwinnii,* Sby. jun." (Carpenter, 1864, p. 529; 1872 reprint, p. 15). If Carpenter had serious doubts about whether *N. darwinii* actually came from Chile, as stated by Sowerby, he did not express them, preferring only to disclaim responsibility for the original locality by specifying "Quoted from S.[outh] A. [merica]" (Carpenter, 1864, p. 637; 1872 reprint, p. 121). Carpenter (1865, p. 203; 1872 reprint, p. 251) later noted that "The original specimen is said to have come from Chili [*sic*]." Because the two species are congeneric, an issue that has never been in question, it would seem best to regard the South American taxon as the type species of the genus.

3. Within months of proposing *Netastoma*, Carpenter (1865, p. 202; 1872 reprint, p. 250) proposed *Nettastomella* as a substitute name, believing the former to be preoccupied by *Nettastoma* Rafinesque (1810, p. 66), a fish.

4. From 1865 to 1955 all references to this taxon have used *Nettastomella*, including the monographic revision of the family by Turner (1955, p. 141–145).

5. Vokes (1956, p. 768; 1967, p. 328), recognizing the implications of the limits drawn on generic homonymy (Article 56), recommended returning to *Netastoma* because it was not preoccupied by *Nettastoma* Rafinesque. Whereas most authors continued using *Nettastomella*, including two important treatments of the family (Turner, 1969, p. N720; Kennedy, 1974, p. 65), several newer references have not (e.g., McLean, 1969; Keen &

Coan, 1974; Coan & Carlton, 1975).

6. In the interest of maintaining nomenclatural stability, and in keeping with the preponderance of relevant literature, the Commission is hereby requested:

(1) to use its plenary powers to suppress the generic name *Netastoma* Carpenter, 1864, for the purposes of the Law of Priority but not for those of the Law of Homonymy;

(2) to place the generic name *Nettastomella* Carpenter, 1865 (gender: feminine), type species, through *Netastoma* Carpenter, 1864, *Pholas darwinii* G.B. Sowerby II, 1849, on the Official List of Generic Names in Zoology;

(3) to place the specific name *darwinii* Sowerby, 1849, as published in the binomen *Pholas darwinii* (specific name of type species of *Nettastomella* Carpenter, 1865) on the Official List of Specific Names in Zoology;

(4) to place the generic name *Netastoma* Carpenter, 1864, as suppressed under the plenary powers in (1) above, on the Official Index of Rejected and Invalid Generic Names in Zoology.

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HETERELIS COSTA, 1887 (INSECTA, HYMENOPTERA): PROPOSED PROCEDURE FOR CONCLUDING THE CASE Z.N.(S.)1175

By the Secretary, International Commission on Zoological Nomenclature

An application by the late Professor J. Chester Bradley for the fixation of the type species of *Heterelis* Costa, 1887, was first received on 12 November 1956. Later, that application was withdrawn and a revised application by J.G. Betrem, J. Chester Bradley and C. Jacot-Guillaume was received on 1 June 1962. This was sent to the printer on 27 July 1962 and published on 26 April 1963 in *Bull. zool. Nom.* vol. 20, pp. 204–205.

2. The essence of the case is an error of citation by Costa when he established *Heterelis*. He cited only one species, as '*E. villosa* Fab. *Scolia villosa* Fab. Ent. syst. II, p. 227'. However, Fabricius had there written not '*Scolia villosa*', but '*T. villosa*', i.e. a *Tiphia*. It is clear that Costa intended *Sphex villosa* Fabricius, for long incorrectly treated as the valid name of *Scolia quinquecincta* Fabricius. This is the specific name now long used for a common south European scoliid wasp; Costa cited its name in the synonymy of *'Heterelis villosa'* and there can be no doubt that that was the species before him.

3. The case should, therefore, have been treated as one of a misidentified type species under Article 70a (i) and the use of the plenary powers should have been requested to designate *Scolia quinquecincta* Fabricius, 1793, as type species. Unfortunately that was not done. In consequence, the possible use of the plenary powers in the case was never advertised.

4. When the Commission came to vote on the case, in Voting Paper (1964) 27, it gave 20 affirmative votes and three negative votes. Three late affirmative votes were received. The majority was thus more than sufficient to use the plenary powers, if only their use had been requested and the necessary public notice given.

5. No comment was received before the vote took place, but the following comments were returned by members of the Commission with their voting papers:

Mayr: 'The application is faulty. *Heterelis* has no junior synonym that has been in use for 50 years or more and therefore does not qualify under Art. 23b. The only decision the Commission needs to take is to fix the correct type species, e.g. *villosa* of Costa (*non* Fab.) = *quinquecincta.'*

Simpson (voting against): 'On evidence submitted, I believe that stability would be better served by rejecting this unused name than by its resurrection in a sense that cannot be given it under the letter of the Code and may be rejected by sticklers for strict priority.'

Sabrosky: 'This is clearly a simple case of a misidentified type species, to be decided by the use of the plenary powers. See Article 70a.'

6. As the case now stands, the strong majority vote of the Commission in favour of stabilising *Heterelis* with *Scolia quinquecincta* Fabricius, 1793, as its type species, cannot be published as an Opinion because the proper procedures for advertising the possible use of the plenary powers were not followed.

I accordingly now ask the International Commission on Zoological Nomenclature:

(1) to use its plenary powers to set aside all designations of type species hitherto made for the nominal genus *Heterelis* Costa, 1887, and, having done so, to designate *Scolia quinquecincta* Fabricius, 1793, as type species of that genus;

(2) to place the generic name *Heterelis* Costa, 1887 (gender: feminine), type species, by designation under the plenary powers in (1) above, *Scolia quinquecincta* Fabricius, 1793, on the Official List of Generic Names in Zoology;

(3) to place the specific name *quinquecincta* Fabricius, 1793, as published in the binomen *Scolia quinquecincta* (specific name of type species of *Heterelis* Costa, 1887) on the Official List of Specific Names in Zoology.

7. The possible use of the plenary powers in this case will be advertised. If no objection to the above proposals is received within the prescribed six-months period, I propose to publish the Commission's ruling without taking a fresh vote on the case.

LEPTINOTARSA CHEVROLAT, 1837 (INSECTA, COLEOPTERA): REVISED PROPOSALS FOR CONSERVATION. Z.N.(S.)2048

By Richard E. White (*Systematic Entomology Laboratory USDA, Washington D.C. 20560, U.S.A.*)

In 1974 (*Bull. zool. Nom.* vol. 31: 144) Richard L. Jacques, Jr.; and I asked the Commission to suppress the generic name *Polygramma* Chevrolat, 1837, so as to conserve the generic name *Leptinotarsa* "Stål, 1858". *Leptinotarsa* is the name that is in general use for the Chrysomelid genus that includes the well known potato pest the Colorado Potato Beetle, *L. decemlineata* (Say), and it is clearly important to maintain it. The generic name is used in many hundreds of economic publications, and a change of nomenclature would cause great confusion.

2. As part of our former application we accepted the Chevrolat citation of *juncta* Germar beneath *Polygramma,* in Dejean, *Cat. Col.,* triosième édit., part 5, p. 397 [5 July 1837] as constituting an indication, with the basis being Article 16a(v) of the Code. (I follow Barber, H.S. & Bridwell, J.C., 1940, *Bull. Brooklyn entomol. Soc.,* vol. 35, pp. 1–12 concerning the date of that edition of Dejean's catalogue.) It has been brought to my attention that by the same reasoning, the citation of '*alternata* Klug' (as a synonym of '*xanthogramma* Dej.' under *Polygramma* on p. 398) can be interpreted as referring to the available name *Agra alternata* Klug, 1834, *Jahrb. Insektenk.* vol. 1 (4), p. 60, of the CARABIDAE, and the citation of '*cinctipennis* Chevrolat' beneath *Leptinotarsa* (p. 397) can be interpreted as referring to *Altica cinctipennis* Chevrolat, 1834, *Coleopt. Méxique,* vol. 3, no. 86. The latter species now remains in the subfamily ALTICINAE (of CHRYSOMELIDAE) in the genus *Asphaera.*

3. Despite the extreme unlikelihood that Chevrolat would have placed a member of the CARABIDAE in the CHRYSOMELIDAE, and the unlikelihood that he would have placed a flea beetle among the CHRYSOMELINAE, I am not able to prove that the citations in the Dejean list of '*alternata* Klug' and '*cinctipennis* Chevrolat' do not refer to those available names. Therefore, I must accept them on the same basis that I have accepted *juncta* Germar.

4. In the earlier application it was assumed that *Leptinotarsa* had been made available by Stål, 1858, *Ofvers. Kong. Vetensk. Förh.,* vol. 15: 475. However, acceptance of *cinctipennis* Chevrolat as referring to an available name makes *Leptinotarsa* available as from 1837, with Chevrolat as its author and *L. cinctipennis* as its

type species by monotypy. The consequence would be that *Leptinotarsa* would be transferred to a genus of flea beetles and the unused generic name *Polygramma* would have to be adopted for the Colorado Potato Beetle. Stål attributed the generic name to Chevrolat and included nine species in the genus; *cinctipennis* was not among them, and none was designated as type species. Motschulsky, however (1860, *in* Schrenck, *Reisen Forsch. Amur-Lande,* vol. 2(2): 182) designated "*Lept. Heydenii* Chev.", one of the species included by Stål, as type species, and it is in that sense that the name has been applied for the last 120 years. *Leptinotarsa heydenii* Chevrolat, *in* Dejean, 1837: 397, is a *nomen nudum,* and the name was first made available by Stål, 1858, *loc. cit.*

5. Since *Chrysomela juncta* Germar, 1824, is also a species of *Leptinotarsa* as now understood, action by the Commission to validate the latter name in that sense will make it and *Polygramma* simultaneously published synonyms. Then – but not until then – it would be logically possible for any zoologist to select *Polygramma* as the valid name for the genus in question. In order to prevent this possibility from arising, the Commission is asked to suppress *Polygramma.*

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers
  (a) to suppress the generic name *Polygramma* Chevrolat, 1837, for the purposes of the Law of Priority but not for those of the Law of Homonymy;
  (b) to set aside all designations of type species for the nominal genus *Leptinotarsa* Chevrolat, 1837 made prior to the designation by Motschulsky, 1860, of *Leptinotarsa heydenii* Stål, 1858, as type species of that genus;

(2) to place the generic name *Leptinotarsa* Chevrolat, 1837 (gender: feminine), type species, by subsequent designation by Motschulsky, 1860, as ratified under the plenary powers in (1)(b) above, *Leptinotarsa heydenii* Stål, 1858, on the Official List of Generic Names in Zoology;

(3) to place the specific name *heydenii* Stål, 1858, as published in the binomen *Leptinotarsa heydenii* (specific name of type species of *Leptinotarsa* Chevrolat, 1837, on the Official List of Specific Names in Zoology;

(4) to place the generic name *Polygramma* Chevrolat, 1837, as suppressed under the plenary powers in (1)(a) above, on the Official Index of Rejected and Invalid Generic Names in Zoology.

WITHDRAWAL OF PROPOSAL CONCERNING THE HOMONYMY OF IOTONCHINAE IN NEMATODA. Z.N.(S.) 2137

By the Secretary, International Commission on Zoological Nomenclature

In *Bull. zool. Nom.* vol. 35: 121–122, Dr M. Shamim Jairajpuri *(Section of Nematology, Aligarh Muslim University, Aligarh-202001, India)* put forward proposals for removing the homonymy between IOTONCHINAE Goodey, 1953, based on *Iotonchium* Cobb, 1920 and IOTONCHIDAE Jairajpuri, 1969, based on *Iotonchus* Cobb, 1916.

Professor L.B. Holthuis *(Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands)* and Professor I. Andrássy *(Eötvös Loránd University, Zoosystematical Institute, VIII Pushkin-u. 3, Budapest)* have both drawn my attention to the fact that the supposed homonymy does not in fact exist, because the family name based on *Iotonchium* Cobb, 1920, is IOTONCHIIDAE, not IOTONCHIDAE. Under the Code, therefore, IOTONCHINAE Goodey, 1953, is an incorrect original spelling that does not enter into homonymy and there is no call for the Commission to act.

Nevertheless, in view of the similarity of the two names, I thought it advisable to consult nematologists as to the likelihood of confusion arising from their continued use. I was assured that the fact that the two families are placed in different orders of Nematoda, and the differences in the biology of the species within them, made it unlikely that any confusion would arise.

Dr M. Shamim Jairajpuri asks that the following paragraph be included: 'It should be mentioned in this note that the said homonymy was proposed in the light of Article 29d which was operative at that time (1978). Article 29d is, however, contrary to Articles 32c and 55b, and the Division of Zoology of IUBS has recently (1979) approved of the Commission's proposal that it be deleted. The proposed homonymy between IOTONCHIDAE based on *Iotonchium* and IOTONCHIDAE based on *Iotonchus* will also therefore become non-existent. It may be noted that this homonymy with the deletion of 29d was only a result of the incorrectly formed stem of IOTONCHIDAE based on *Iotonchium* which should in future be read as IOTONCHIIDAE. Consequently, Dr M. Shamim Jairajpuri, the proposer of the homonymy, has agreed to withdraw the application.'

CYPHASPIS BURMEISTER, 1843 (TRILOBITA): PROPOSED DESIGNATION OF TYPE SPECIES UNDER THE PLENARY POWERS. Z.N.(S.)2257

By A.T. Thomas (*Department of Geological Sciences, The University of Aston in Birmingham, Gosta Green, Birmingham, B4 7ET*) and R.M. Owens (*National Museum of Wales, Cardiff, CF1 3NP, U.K.*)

Burmeister, 1843, *Organisation u. Uebersicht Trilobiten,* p. 103, erected *Cyphaspis* for specimens he wrongly identified with *Calymene clavifrons* Dalman, 1827, *Om palaeaderna*, p. 260. Burmeister stated that this species was the only one he could definitely assign to the genus and under the provisions of Art. 70 *Calymene clavifrons* Dalman, 1827 would be the type species of *Cyphaspis* by monotypy. Since Burmeister misidentified that species, under Art. 70a the case is referred to the Commission for a solution.

2. Burmeister, 1846, *Organisation of trilobites*, p. 99, realised that he had been wrong in assigning his material to Dalman's species and correctly identified his specimens with *Phacops ceratophthalmus* Goldfuss, 1843, *Neues Jb. Miner. Geol. Paläont.*, p. 564.

3. Angelin, 1854, *Palaeontologica Scandinavica,* p. 32, erected *Cyrtometopus* with *Calymene clavifrons* Dalman as type by monotypy. Were the Commission to rule that *C. clavifrons* Dalman is the type species of *Cyphaspis, Cyrtometopus* would be a junior synonym. *Cyrtometopus* is a well-established genus of the CHEIRURIDAE. If the proposals introduced here are supported, the genus can continue to be used in its accepted sense.

4. Richter & Richter, 1926, *Abh. preuss. geol. Landesanst.*, vol. 99, p. 95, attributed *Cyphaspis* to Barrande, 1846, *Notice préliminaire* with *C. burmeisteri* Barrande, 1846, *Notice préliminaire,* p. 59, as type species. They rightly indicated that *C. burmeisteri* is conspecific with *Otarion diffractum* Zenker, 1833, *Naturgeschichte der Urwelt*, p. 44, type species by monotypy of *Otarion* (Opinion 88) (1925, *Smithson. misc. Collns*, vol. 73, p. 23-26: Direction 67, *Ops. Decls. Int. Comm. zool. Nom.*, vol. 1E, pp. 111–128, 1957). The Richters consequently considered *Cyphaspis* to be a junior subjective synonym of *Otarion* Zenker, 1833.

5. Prantl & Přibyl, 1951, *Stát. geol. Úst. Česk. Rep.*, vol. 17, p. 444–445, correctly indicated that Burmeister, 1843, was the author of *Cyphaspis* and that he erected the genus for specimens belonging to *Phacops ceratophthalmus* Goldfuss. Prantl & Přibyl

regarded *C. ceratophthalmus* and *O. diffractum* as congeneric and consequently considered *Cyphaspis* to be a junior subjective synonym of *Otarion*.

6. Thomas & Owens, 1978, *Palaeontology*, vol. 21, pp. 70–71, examined topotype material of *C. ceratophthalmus* and *O. diffractum* and listed characters which they believed justified separation at the generic level. Thomas & Owens incorrectly regarded *C. ceratophthalmus* as the type species of *Cyphaspis* by subsequent designation of Burmeister, 1846.

7. It is in the interests of nomenclatural stability and uniformity to regard *C. ceratophthalmus* as the type species of *Cyphaspis*. Such usage preserves Burmeister's original concept of the genus and the view later workers have had of it; the stability of *Cyrtometopus* is also ensured. The nomenclatural confusion surrounding *Cyphaspis* has arisen partly because of Burmeister's original misidentification of the type species and partly because of the Richters' incorrect attribution of the genus to Barrande.

8. The Commission is accordingly asked:

(1) to use its plenary powers to set aside all designations of type species hitherto made for *Cyphaspis* Burmeister, 1843, and, having done so, to designate *Phacops ceratophthalmus* Goldfuss, 1843 as the type species of that genus;

(2) to place the generic name *Cyphaspis* Burmeister, 1843 (gender: feminine), type species, by designation under the plenary powers in (1) above, *Phacops ceratophthalmus* Goldfuss, 1843, on the Official List of Generic Names in Zoology;

(3) to place the specific name *ceratophthalmus* Goldfuss, 1843, as published in the binomen *Phacops ceratophthalmus* (specific name of type species of *Cyphaspis* Burmeister, 1843) on the Official List of Specific Names in Zoology;

(4) to place the generic name *Cyrtometopus* Angelin, 1854 (gender: masculine), type species, by monotypy, *Calymene clavifrons* Dalman, 1827, on the Official List of Generic Names in Zoology.

(5) to place the specific name *clavifrons* Dalman, 1827, as published in the binomen *Calymene clavifrons* (specific name of type species of *Cyrtometopus* Angelin, 1854), on the Official List of Specific Names in Zoology.

STERNOTHERUS GRAY, 1825, CORRECT SPELLING; AND *PELUSIOS* WAGLER, 1830, PROPOSED CONSERVATION (REPTILIA, TESTUDINES). Z.N.(S.)2278.

By Hobart M. Smith & Rozella B. Smith (*Department of Environmental, Population and Organismic Biology*), and David Chiszar (*Department of Psychology, University of Colorado, Boulder, Colorado 80309, U.S.A.*)

The correct spelling of the name for the genus universally recognized for the musk turtles ever since Stejneger's revival of it in 1923 has been a recurring source of disagreement among herpetologists, some adopting the spelling *Sternothaerus*, others the conventional *Sternotherus*. It is our desire that the matter be laid to rest by official endorsement of the latter name. At the same time it is essential in the interest of stability of nomenclature that steps be taken to prevent replacement of the long-accepted name *Pelusios* Wagler, 1830, by *Sternothaerus* Bell, 1826.

2. Giving consideration first to the proper generic name for the American musk turtles, the earliest candidate is *Sternotherus* Gray, 1825, p.211, containing "*S. pensylvanica*" (i.e., *Testudo pensilvanica* Gmelin, 1789 = *Testudo subrubra* Lacépède, 1788, now *Kinosternon subrubrum subrubrum*) and "*S. odorata*" (i.e., *Testudo odorata* Latreille, 1801, now *Sternotherus odoratus*). The earliest type designation was by Stejneger, 1902, p. 237, who chose the latter species. The next candidate is *Sternothaerus* Bell, 1826, p.305, which was proposed as "STERNOTHAERUS Mihi" with four species, none designated as type: (1) *trifasciatus* sp.n. (now *Cuora trifasciata*); (2) *leachianus* sp.n. (now *Pelusios subniger* (Lacépède, 1788); (3) *odoratus* (i.e., *Testudo odorata* Latreille); and (4) *boscii* (i.e., *Terrapene boscii* Merrem, 1820, a junior synonym of *Testudo odorata* Latreille).

3. At this point two questions arise: (1) the status of Gray's *Sternotherus* relative to Bell's *Sternothaerus*, inasmuch as Gray cited his name as '*Sternotherus,* Bell, Mss.'; and (2) the type of Bell's *Sternothaerus*, inasmuch as three genera as now understood are represented by the species included in it by Bell. The latter question concerns *Pelusios* and is discussed beginning with paragraph 9; the first question concerns our present topic, namely the nominal genus for the American musk turtles.

4. Although Gray, 1825, credited Bell as the source of *Sternotherus,* the wording of the description was completely different from that of *Sternothaerus* Bell, 1826, p. 305. Gray employed the first person form in commenting on the genus: 'Cuvier

describes the anterior and posterior lobes of the sternum of these species to be moveable; but the hinder was fixed on the specimens which I have examined, which were all dry'. Thus the description appeared to be in Gray's words, even though he clearly may have drawn the idea for the genus from Bell's MS.

5. The International Code of Zoological Nomenclature (1964), Article 50, specifies, in this context, that 'The author . . . of a scientific name is . . . . the person . . . . who first publishes it . . . in a way that satisfies the criteria of availability . . ., unless it is clear from the contents of the publication that . . . some other person . . . is alone responsible both for the name and the conditions that make it available'. Clearly Gray's account is not a copy of Bell's, and accordingly it can only be concluded that Bell did not provide the description in the form in which it appeared in Gray's work, even though he may have provided the name or a basis for the name. Gray must therefore be accepted as the author of *Sternotherus*. Bell remains author of his name *Sternothaerus*, based upon a different array of taxa, including one African, one Asian, and two North American nominal species.

6. The name appearing in 1825 could not be rendered as *Sternothaerus* even if it were attributed to Bell. Although it is true that incorrect original spellings are to be replaced by correct spellings, as pointed out by Tinkle, 1958, p. 51, the Code severely limits the concept of 'incorrect original spellings'. In this case, only an inadvertent error could be called incorrect, whereas there is no evidence whatever that Gray did not use the spelling *Sternotherus* quite deliberately. Article 32 of the Code makes it clear that even if Gray did err in transliteration, such an error is not itself 'inadvertent'. Again there is no escape from the conclusion that *Sternotherus* is the correct spelling for the 1825 name. Indeed, Gray repeated this spelling in his subsequent works, giving no indication of occurrence of error therein.

7. In turn, Article 56 expressly provides that 'even if the difference between two genus-group names is due to only one letter, these two names are not to be considered homonyms'. Accordingly *Sternothaerus* of 1826 must be judged on its own merits, as it were, as a name completely independent of and different from *Sternotherus* of 1825.

8. Thus accepting the generic name *Sternotherus* as established by Gray in 1825, with his exact spelling, its application is fixed by its type species, first designated, so far as we are aware, by Stejneger, 1902, p. 237. This is the conclusion reached by most workers, including the two most recent reviews of the situation (Zug, 1971; Smith & Larsen, 1974). However, Tinkle, 1958, p. 51, reasoned that *Sternothaerus* is the correct name for the American

musk turtles, and he has been followed by several authors.

9. Turning now to Bell's *Sternothaerus*, it should be noted that there is some question whether Bell's article appeared in 1826 (as thought by Smith & Larsen) or in 1825 (as construed by Stejneger and by Zug). The 'published title page' (Zug) for Gray states September, 1825, and for Bell October, 1825; thus even if Bell's article did appear in 1825 it followed Gray's article. Smith & Larsen, 1974, p. 44, regard Bell's 1825 date as the date of presentation, not of publication, and there is no evidence that Bell's work was actually published before 1826.

10. Up until 1902 most workers regarded *Sternothaerus* Bell as the valid name for the African genus now known as *Pelusios*; nomenclatural confusion with *Sternotherus* Gray presented no problem, since the American musk turtles were, until 1923, all regarded as species of *Kinosternon* Spix. It was not until Stejneger, 1902, p. 237, cited the type species of *Sternothaerus* Bell as *Testudo odoratus* that the next available name, *Pelusios* Wagler, 1830, was adopted for the African genus, and has so remained in virtually all works ever since.

11. Stejneger construed *Testudo odoratus* as the type species of *Sternothaerus* Bell on 'automatic' grounds, due to the duplication in the two nominal genera *Sternotherus* and *Sternothaerus* (the first derived from the second) of one nominal species, *Testudo odorata*. The decision was, however, accepted by virtually all workers, whether agreeing with the logic by which it was reached or not.

12. As *Sternothaerus* Bell must be treated as an independently established nominal taxon, there are no automatic grounds in the Code whereby the type species of *Sternothaerus* Bell can be properly regarded as fixed, except by subsequent designation. No one, save Wermuth & Mertens, 1977, p. 12, has noted any explicit designation prior to Stejneger's in 1902; Wermuth & Mertens pointed out that Fitzinger, 1843, p. 29, explicitly designated *odoratus* as the type of Bell's *Sternothaerus*, thus fortunately conforming with Stejneger's designation that has been so widely accepted.

13. However, in a work completely overlooked by all workers, including ourselves, up until the present time, Bell, 1828, pp. 514-515, explicitly designated the type species of his *Sternothaerus* as his own *Sternothaerus leachianus* (= *Pelusios subniger* (Lacépède, 1788)) of the same work. This is unquestionably the earliest type designation for the genus, and its acceptance would make *Sternothaerus* Bell, 1826, a senior subjective synonym of *Pelusios* Wagler, 1830, type species *Testudo subnigra* Lacépède, 1788, by subsequent designation by Fitzinger, 1843, p. 29. This

would upset the nomenclature of *Pelusios* that has been in general current use since 1902, so clearly, in the interests of stability, Bell's type-species designation should be set aside in favour of Fitzinger's later designation.

14. Accordingly, we here ask the International Commission on Zoological Nomenclature:–

(1) to use its plenary powers to set aside all fixations of type species for *Sternothaerus* Bell, 1826, prior to the designation of *Testudo odorata* Latreille, 1801, by Fitzinger, 1843, p. 29;

(2) to place on the Official List of Generic Names in Zoology:
   (a) *Sternotherus* Gray, 1825 (gender: masculine), type-species by subsequent designation by Stejneger, 1902, p. 237, *Testudo odorata* Latreille, 1801;
   (b) *Pelusios* Wagler, 1830 (gender: masculine), type-species designated by Fitzinger, 1843, p. 29, *Testudo subnigra* Lacépède, 1788;

(3) to place on the Official List of Specific Names in Zoology:
   (a) *odorata* Latreille, 1801, as published in the binomen *Testudo odorata* (specific name of the type species of *Sternotherus* Gray, 1825);
   (b) *subnigra* Lacépède, 1788, as published in the binomen *Testudo subnigra* (specific name of the type species of *Pelusios* Wagler, 1830);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology:
   (a) *Sternothaerus* Bell, 1826, a junior objective synonym of *Sternotherus* Gray, 1825, by virtue of the ruling under the plenary powers in (1) above.

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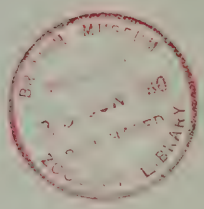

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LONDON

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(Arranged in order of election or of most recent re-election)

Prof. T. HABE *(National Science Museum, 3-23-1 Hyakunin-cho, Shinjuku-ku, Tokyo 160, Japan)* (20 February 1972) **Marine Biology**

Mr. David HEPPELL *(Department of Natural History, Royal Scottish Museum, Edinburgh EH1 1JF, Scotland)* (20 February 1972) *(Councillor)* **Mollusca**

Dr. I.W.B. NYE *(British Museum (Natural History), Cromwell Road, London SW7 5BD)* (20 February 1972) *(Assistant Secretary)* **Lepidoptera**

Prof. A. WILLINK *(Universidad Nacional de Tucumán, Instituto Miguel Lillo, Miguel Lillo 205, 4000 Tucumán, Argentina)* (20 February 1972) **Neotropical Hymenoptera**

Prof. Enrico TORTONESE *(Istituto Zooprofilattico, Lungo Bisagno Dalmazia 45A, 16141, Genova, Italy)* (30 September, 1972) **Pisces; Echinodermata**

Prof. Per BRINCK *(Ecology Building, University of Lund, S-223 62, Lund, Sweden)* (30 September 1972) *(Vice-President)* **Arthropoda; Ecology**

Prof. Dr. Raphael ALVARADO *(Departamento de Zoologia, Facultad de Ciencias, Universidad de Madrid, Madrid 3, Spain)* (30 September 1972) **Echinoidea; Asteroidea**

Prof. E. BINDER *(Muséum d'Histoire Naturelle, CH 1211 Geneva 6, Switzerland)* (30 September 1972) **Mollusca**

Prof. Harold E. VOKES *(University of Tulane, Department of Geology, New Orleans, Louisiana 70118, U.S.A.)* (30 September 1972) **Mollusca**

Dr. L.B. HOLTHUIS *(Rijksmuseum van Natuurlijke Historie, Postbus 9517, 2300 RA Leiden, The Netherlands)* (30 September 1972) *(Councillor)* **Crustacea**

Dr. G. BERNARDI *(Muséum National d'Histoire Naturelle, 45 bis rue de Buffon, 75005, Paris, France)* (30 September 1972) **Lepidoptera**

Prof. C. DUPUIS *(Muséum National d'Histoire Naturelle, 57 rue Cuvier, 75231, Paris, Cedex 05 France)* (30 September 1972) **Heteroptera**

Dr. M. MROCZKOWSKI *(Instytut Zoologiczny, Polska Akademia Nauk, ul. Wilcza 64, Warsaw, Poland)* (14 March 1975) **Coleoptera**

Prof. H.E. WELCH *(Department of Zoology, University of Manitoba, Winnipeg, Manitoba, R3T 2N2 Canada)* (17 March 1976) **Nematoda**

Prof. Dr. Otto KRAUS *(Zoologisches Institut und Zoologisches Museum, 2000 Hamburg 13, Germany)* (29 September 1976) **Arachnida, Myriapoda**

Dr. W.D.L. RIDE *(College Fellow in Life Sciences, School of Applied Science, Canberra College of Advanced Education, P.O. Box 1, Belconnen, A.C.T. 2616, Australia)* (29 September 1976) **Mammalia; Recent and Fossil**

Dr. Curtis W. SABROSKY *(Systematic Entomology Lab., USDA c/o U.S. National Museum, Washington, D.C. 20560, U.S.A.)* (29 September 1976) *(President)* **Diptera**

Dr. H.G. COGGER *(Australian Museum, Sydney 2000, N.S.W. Australia)* (29 September 1976) **Reptilia; E D P Methods**

Prof. Dr. Gerhard HAHN *(Fachbereich Geowissenschaften, Universitätsgebiet Lahnberge, 3550 Marburg, BRD)* (27 December 1978) **Palaeontology**

Prof. Dr. O. HALVORSEN *(Institute of Biology and Geology, University of Tromsö, P.O. Box 790, N-9001 Tromsö, Norway)* (27 December 1978) **Parasitology**

Dr. V.A. TRJAPITZIN, *(Zoological Institute, Academy of Sciences, Leningrad B-164, USSR)* (27 December 1978) **Entomology**

Dr. F.M. BAYER *(U.S. National Museum, Washington, D.C. 20560, U.S.A.)* (23 August 1979) **Octocorallia; Systematics**

Prof. John O. CORLISS *(University of Maryland, College Park, Maryland 20742, U.S.A.)* (23 August 1979) **Protozoa; Systematics**

Mr. R.V. MELVILLE *(British Museum (Natural History), Cromwell Road, London SW7 5BD)* (23 August 1979) *(Secretary)* **Palaeontology**

Dr. Y.I. STAROBOGATOV *(Zoological Institute, Academy of Sciences, Leningrad B-164, U.S.S.R.)* (23 August 1979) **Mollusca, Crustacea**

Dr. P.T. LEHTINEN, *(Department of Zoology, University of Turku. SF-20500 Turku 50, Finland)* (8 August 1980) **Arachnida**

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 37, part 3 (pp. 129 - 192) 25th September 1980

NOTICES

(a) *Date of commencement of voting.* In normal circumstances the Commission may start to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after the publication of each application. Any zoologist who wishes to comment on any of the applications in the present part is invited to send his contribution, in duplicate, to the Secretariat of the Commission as quickly as possible, and in any case in time to reach the Secretariat before the close of the six-month period.

(b) *Possible use of the plenary powers.* The possible use by the Commission of its plenary powers is involved in the following applications published in the present part of the *Bulletin* (those marked with an asterisk involve the application of Articles 23a-b and 79b):

*(1) *Voluta papilio* Link, 1807 (Gastropoda), proposed conservation; Z.N.(S.) 1777. W.O. Cernohorsky.

(2) *Antilope zebra* Gray, 1838 (Mammalia), revised proposals for conservation. Z.N.(S.)1908. W.F.H. Ansell.

*(3) *Sphinx tipuliformis* Clerck, 1759 (Insecta, Lepidoptera), proposed conservation. Z.N.(S.)2138. N.P. Kristensen.

*(4) *Sesia andrenaeformis* Laspeyres, 1801 (Insecta, Lepidoptera), proposed conservation. Z.N.(S.)2139. N.P. Kristensen.

(5) *Chermes fusca* Zetterstedt, 1828 (Insecta, Homoptera), a secondary homonym in *Psylla* Geoffroy, 1762: proposed validation. Z.N.(S.)2149. P. Lauterer.

(6) *Lamprocabera* Inoue, 1958 (Insecta, Lepidoptera), proposed designation of type species. Z.N.(S.)2160. H. Inoue.

(7) *Calamoecia australica* Sars, 1908, and *C. australis* (Searle, 1911) (Crustacea, Copepoda), proposals to remove confusion. Z.N.(S.)2242. I.A.E. Bayly.

(8) *Ptinella* Motschulsky, 1844, and *Nephanes* Thomson, 1859 (Insecta, Coleoptera), proposed conservation. Z.N.(S.)2258. (O. Biström).

*(9) *Aphis callunae* Theobald, 1915 (Insecta, Aphidoidea), proposed conservation. Z.N.(S.)2283. H.L.G. Stroyan.

(10) *Galago crassicaudatus* Geoffroy, 1812 (Mammalia, Primates), proposed designation of neotype. Z.N.(S.) 2285. T.R. Olson.

(11) *Athyreus* Macleay, 1819 and *Glyptus* Brullé, 1835 (Insecta, Coleoptera), proposed conservation. Z.N.(S.) 1583. H.F. Howden.

(c) *Receipt of new applications.* The following new applications have been received since the publication of vol. 37(2) on 19th June 1980. Those marked with an asterisk involve the application of Articles 23a-b and 79b.

(1) *Dendropoma* Mörch, 1861, and *Siphonium (Dendropoma) lituella* Mörch, 1861 (Gastropoda), proposed conservation. Z.N.(S.)2340. A. Myra Keen & M.G. Hadfield.

(2) *Hyla lactea* Daudin, 1803 (Amphibia), proposed conservation. Z.N.(S.)2341. J.D. Lynch.

(3) Article 45g, interpretation of the terms 'variety' and 'form'. Z.N.(S.)2342. The Secretary.

*(4) *Kassina* Girard, 1853 (Amphiba, Anura), proposed conservation. Z.N.(S.)2343. A. Dubois, A. Stimson, J.-J. Morère & B. Clarke.

*(5) *Calcarina calcar* d'Orbigny, 1839 (Foraminifera), proposed conservation. Z.N.(S.)2344. H.J. Hansen.

*(6) *Drasterius bimaculatus* Rossi, 1790 (Insecta, Coleoptera), proposed conservation. Z.N.(S.)2345. M. Mroczkowski.

*(7) *Trachys nana* Paykull, 1799 (Insecta, Coleoptera), proposed conservation. Z.N.(S.)2346. M. Mroczkowski.

(8) *Atrax* Cambridge, 1877 (Arachnida, Araneae), proposed conservation. Z.N.(S.)2347. M.R. Gray.

(9) Generic, familial and ordinal nomenclature of turtles. Z.N.(S.)2348. R. Bour & A. Dubois.

(10) Generic names in neotropical BATAGURINAE (Reptilia, Chelonii). Z.N.(S.)2349. R. Bour & A. Dubois.

(11) Familial, subfamilial and generic nomenclature of soft-shelled turtles. Z.N.(S.)2350. R. Bour & A. Dubois.

(12) *Papilio fatima* Fabricius, 1793 (Insecta, Lepidoptera), proposed conservation. Z.N.(S.)2351. G. Lamas, R.E. Silberglied & A. Alello.

(13) *Scarabaeus rufus* de Geer, 1776, Moll, 1782, Fabricius, 1792 (Insecta, Coleoptera), proposed suspension of the Law of Homonymy (see also Z.N.(S.)2318). Z.N.(S.) 2352. Z. Stebnicka.

*(14) *Exoprosopa* Macquart, 1840 (Insecta, Diptera), proposed conservation. Z.N.(S.)2353. N.L. Evenhuis.
(15) Proposed use of the term 'epithet' in the Code. Z.N.(S.)2354. The Secretary.
(16) *Attus otiosus* Hentz, 1846 (Arachnida, Araneae), proposed conservation. Z.N.(S.)2355. G.B. Edwards.
(17) *Alveolina* d'Orbigny, 1826, proposed validation (Foraminifera). Z.N.(S.)2356. A.R. Loeblich, Jr. & H. Tappan.
(18) ATYIDAE in Crustacea and Mollusca; proposals to remove the homonymy. Z.N.(S.)2357. T.K. Crosby & A. Carpenter.

SPECIAL ANNOUNCEMENTS

ELECTION OF A NEW MEMBER OF THE COMMISSION

Dr. Pekka T. Lehtinen, of the University of Turku, Finland, has been elected a member of the Commission with effect from 8 August 1980. Dr Lehtinen, who is 46 years of age, is a specialist in Arachnida, and has travelled widely in the developing countries.

PERSONNEL OF THE COMMISSION'S OFFICE

Mr. R.J. Lever, who joined the staff of the office in February 1979, left in February 1980. He made a distinct contribution to work that was quite unfamiliar to him and increased the rate at which it was possible to prepare applications for publication. He also identified a number of old cases whose purposes could in fact be met by the applicaton of the Code. We are sorry to lose him.

RESIGNATION OF A MEMBER OF THE TRUST

Mr. C.W. Wright has tendered his resignation as a member of the International Trust for Zoological Nomenclature and its Committee of Management because of difficulty in attending meetings.

Mr Wright was elected a member of the Trust in 1958 and has served continuously since that time. For most of the period he was also a member of the Committee of Management. At the same time he was a member of the Editorial Committee of the 1961 International Code of Zoological Nomenclature, where his clarity of thought and cogency of reasoning were highly valued by his colleagues. He has also helped the Commission in many less conspicuous ways. Since his retirement from the Civil Service he has lived in the country and has taken up a research fellowship at Churchill College, Oxford, where he is contributing to a steady flow of publications on Cretaceous ammonites. His presence in London will be sorely missed.

APPOINTMENT OF AN OBSERVER TO THE TRUST

As the accounts for 1979 will show, the U.K. Advisory Board for the Research Councils has generously granted £5000 to the Trust for the financial year 1979-80, and has allocated similar sums for the years 1980-81 and 1981-82. This money will be paid through the Royal Society, whose Council has appointed Dr. C.A. Wright F.R.S. as an observer on its behalf.

The accounts for 1980 will show, in due course, that the International Union of Biological Sciences has allocated $10,000 to the Trust for that year, with similar sums to follow in 1981 and 1982. Dr Wright has also been appointed as an observer on behalf of the Union.

Dr Wright was Secretary-General of the IUBS from 1973 to 1976. His advice to the Trust will therefore be of the greatest value.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
August 1980

COMMENT ON THE PROPOSED SUPPRESSION OF *GECARCINUS HIRTIPES* LAMARCK, 1818. Z.N.(S.)2096
(see vol. 32, pp. 168–170)

By L.B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands*)

Mr Türkay has very clearly set out the history of this case and his reasons for asking the Commission to use its plenary powers. However, it seems to me that there is a much simpler solution to the entire problem, namely to designate a specimen of *Cardisoma hirtipes* Dana, 1852, as neotype of *Gecarcinus hirtipes* Lamarck. In this way the name *hirtipes* is saved, only author and date are changed. As Mr Türkay has said, the description by Lamarck is so short and general – 'G. testa cordiformi; lateribus anticis granulatis subspinosis; clypeo denticulato; pedibus hispidis' – that it fits many species. It contains nothing that makes it impossible for the species to be identified with Dana's species.

2. According to Mr Türkay's revision, *Cardisoma hirtipes* has not (yet?) been found in Mauritius, but it occurs from Polynesia as far west at least as the Nicobar and Andaman islands. The locality of a neotype would become the new (restricted or corrected) type locality, so that that would cause no difficulty here.

3. If this solution were adopted, it would be prudent at the same time to designate a lectotype for *Thelphusa rotunda* Quoy & Gaimard (now *Cardisoma*), but I leave this to the applicant. Personally, I should prefer to see the name *Gecarcinus hirtipes* Lamarck disposed of by synonymising it with *Cardisoma hirtipes* Dana (through a neotype designation) than by suppression for all purposes, as proposed by Mr Türkay.

REPLY TO DR HOLTHUIS' COMMENT CONCERNING THE PROPOSED SUPPRESSION OF *GECARCINUS HIRTIPES* LAMARCK, 1818 Z.N.(S.)2096.

By M. Türkay *(Natur-Museum und Forschungs-Institut Senckenberg. Frankfurt am Main, Germany)*

Dr Holthuis has pointed out in his comment a way by means of which the status of *Gecarcinus hirtipes* Lamarck, 1818, may be fixed without suppression of the name under the plenary powers, namely to designate a specimen of *Cardisoma hirtipes* Dana, 1852, as neotype of *Gecarcinus hirtipes* Lamarck, 1818. Dr Holthuis is right in saying that the short description given by Lamarck may fit *Cardisoma hirtipes* Dana, 1852, as well. The only indication excluding Dana's species is in fact the locality 'Ile de France' (= Mauritius).

2. *Cardisoma hirtipes* Dana, 1852, does not occur at Mauritius, all specimens identified to Dana's species with provenance more west than the Andaman and Nicobar Islands proved to belong to *Cardisoma rotundum* (Quoy and Gaimard, 1824). While working on my revision I traced and

reidentified all available material of the region. This is true also for all specimens from Mauritius that I have seen and especially for all specimens of the reference collection kept at the Mauritius Institute (Port Louis, Mauritius). If *Cardisoma hirtipes* Dana, 1852, occurred at Mauritius, it would surely be represented at least in this last collection.

3. As the locality is part of Lamarck's description, it seems highly undesirable to me to pass over this exact indication. Following Dr Holthuis' suggestions would result in eliminating this only restricting part of the original description. In my opinion, however, an original type locality should be regarded as sure, unless the contrary may be proved by the exact description or type material.

4. For the selection of a neotype it is obligatory to prove that the locality of the specimen indicated for this purpose is near to the locality of the original type material. (Art. 75c, 4). The nearest possible localities will of course be the Andaman and Nicobar Islands. This solution is in my opinion unsatisfactory as I see no possibility of preference for any locality within the range of *Cardisoma hirtipes* Dana, 1852. All possible localities are too far away.

5. Under the present circumstances I see no chance for *Gecarcinus hirtipes* Lamarck, 1818 being identical with *Cardisoma hirtipes* Dana, 1852. The consequences of substituting *G. hirtipes* Lamarck, 1818, for *C. rotundum* (Quoy & Gaimard, 1824) or identifying it with *C. carnifex* (Herbst, 1796) have been shown in my original application *(Bull. zool. Nom.*, vol. 32, pp. 168-170).

6. For these reasons I continue to ask the commission for suppression of *Gecarcinus hirtipes* Lamarck, 1818, for all purposes.

MORPHIDAE (INSECTA, LEPIDOPTERA), A FURTHER CORRECTION. Z.N.(S)2201

By C.F. Cowan (*4, Thornfield Terrace, Grange-over-Sands, Cumbria, LA11 7DR, England*)

In *Bull. zool. Nom.*, vol. 34(2), pp. 109–111, I requested that Family-Group Name Number 225 on the Official List be changed from MORPHIDAE Westwood, [1851] to MORPHIDAE Boisduval, 1836.

2. Dr Gerardo Lamas of Peru has alerted me to an even earlier proposal of this name, which I must apologise for having completely overlooked.

3. Newman, E., Attempted Division of British Insects into natural Orders (*Ent. Mag.* vol. 2(4) (Oct. 1834), pp. 379–430) covered all insects, including some exotics. Among the latter was "MORPHITES" (pp. 379, 381), which, although given neither a diagnosis nor any included genera, was clearly based on the already universally recognised generic name *Morpho* Fabricius, 1807 [misprinted '1808' in the earlier application]. This proposal appears perfectly valid and acceptable.

4. I therefore request that paragraph 8 of my application referred to in line 1 above be cancelled, and that the International Commission take instead the following action:–

(1) substitute in the *Official List of Family-Group Names in Zoology* against Name No. 225 the Family-Group name MORPHIDAE

(correction of MORPHITES) Newman, E., 1834 (*Ent. Mag.* vol. 2(4), pp. 379, 381) for the present name MORPHIDAE Westwood, [1851] (and its reference); with type-genus unaltered;

(2) place on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* the family-group names –

(a) MORPHITES Newman, E., 1834 (*Ent. Mag.* vol. 2, pp. 379, 381), an incorrect original spelling of MORPHIDAE;

(b) MORPHOIDES Agassiz, 1847 (*Nomencl. zool., Index univ.*, 4° edn., p. 239, an unjustified emendation of MORPHIDES Boisduval, 1836, itself an incorrect subsequent spelling of MORPHIDAE.

COMMENT ON THE PROPOSED CONSERVATION OF EDWARDSIIDAE ANDRES, 1881 (COELENTERATA: ACTINARIA). Z.N.(S.)2261

(see vol. 36: 175–179)

By R. K. Brooke (*FitzPatrick Institute, University of Cape Town, Rondebosch 7700, R.S.A.*) and
Prof. J.H. Day (*47 Liesbeek Rd., Rosebank 7700, R.S.A.*)

While Dr Williams has made a very good case which we support for the conservation of *Edwardsia* de Quatrefages, 1841, he has given no reasons for his request that the International Commission place the family-group name EDWARDSIIDAE Andres, 1881, on the Official List of Family-Group Names in Zoology. If the Commission decides to comply with his request to conserve *Edwardsia* as we hope it will, EDWARDSIIDAE is adequately protected unless there is some problem to which Dr Williams has not drawn attention. The Commission should not be asked to do nor should it do anything more than is needed to solve the problem placed before it.

Reply to the Comment of R.K. Brooke & J.H. Day on Z.N.(S.)2261

By R.B. Williams (*2 Carrington Place, Tring, Herts. HP23 5LA*)

Brooke & Day have questioned the need to request the Commission to place the name EDWARDSIIDAE Andres, 1881 on the Official List of Family-Group Names in Zoology. I am not aware of any problem connected with this name beyond that which I have already stated (Williams, 1979).

2. At the time of writing, the two problems of homonymy of the genus name *Edwardsia* and the invalidity of the family name EDWARDSIIDAE remain separate. I accept that if *Edwardsia* Costa, 1834 were to be suppressed in favour of *Edwardsia* de Quatrefages, 1841, then EDWARDSIIDAE would be automatically validated, but if any valid objection were raised to the suppression of *Edwardsia* Costa, the application for conservation of EDWARDSIIDAE and its placing on the Official List would still have to be considered.

3. In complex cases, it is important to place before the Commission all the relevant information and alternative suggested actions which might be necessary. It is then the responsibility of the Commission alone to judge whichever of the suggested actions are most appropriate in the circumstances.

REFERENCES

WILLIAMS, R. B., 1979. *Edwardsia* Costa, 1834 (Arthropoda: Crustacea): proposed suppression under the plenary powers with conservation of *Edwardsia* de Quatrefages, 1841 and Edwardsiidae Andres, 1881 (Coelenterata: Actiniaria). Z.N.(S.)2261. *Bull. zool. Nom.* vol. 36: 175–179.

COMMENT ON PROPOSED DESIGNATION OF NEOTYPE FOR *MUSCICAPA RUFICAUDA* SWAINSON, 1838 (AVES). Z.N.(S.)2270

(see vol. 36, pp. 180–186)

(1) By H.E. Wolters (*Zoological Museum Alexander Koenig, D.5300 Bonn, B.R.D.*)

Though I dislike the growing tendency to retain names for taxa to which they were erroneously applied by most or all subsequent authors, I should agree with Mr Benson's proposal to use in future the name *Siphia ruficauda* Sharpe, 1879 for the flycatcher hitherto known as *Muscicapa* (or more correctly, as I believe, *Ficedula) ruficauda* Swainson, 1838 (the holotype of which is a specimen of what is generally known as *Cyornis unicolor* Blyth, 1843) were it not for the fact that, many years before Sharpe, Blyth, 1851, *J. Asiatic Soc. Bengal,* vol. 20, p. 523, had already proposed the name *Cyornis aequalicauda* (erroneously quoted as *Muscicapa aequalicauda* by Stuart Baker, *Fauna British India,* Birds, vol. 7, p. 138) for a bird from Kunawár, Kachhar, which represents this same species. Although I have not had an opportunity to examine the type specimen, there can be no doubt from the original description (which was kindly copied for me by Dr G.F. Mees of Leiden) that Blyth's name applies to the *Muscicapa ruficauda* of authors. I therefore cannot see any reason for suppressing Blyth's name *aequalicauda,* and *Muscicapa ruficauda* auctt. therefore should stand as *Muscicapa* (or *Ficedula*) *aequalicauda* (Blyth, 1851). On the other hand, in order to avoid confusion, the binomen *Muscicapa ruficauda* Swainson, 1838, may be suppressed in favour of *Cyornis unicolor* Blyth, 1843, as proposed by Mr Benson.

(2) Reply by C.W. Benson

I agree with Dr Wolters that Blyth's name *aequalicauda* would appear to apply to the taxon *ruficauda* in the sense of Sharpe, 1879 rather than of Swainson, 1838, in view of 'whitish' under tail-coverts and 'Bill dark above, whitish below' (reference *Bull. zool. Nom.* vol. 36, pp. 181-182, 1979, paragraph 6). I am unaware, however, that Blyth's name has ever been used subsequently to 1851 beyond the single citation by E.C.S. Baker referred to

by Dr Wolters (the year being 1930). At least, if there are any further instances they are not mentioned by Dr. Wolters. Accordingly, to use the name *aequalicauda* in preference to the widely accepted *ruficauda* would disturb stability and cause confusion.

It seems that Dr Wolters has not understood that, if my application is approved, '*ruficauda* auctorum *sensu* Sharpe, 1879', will become *ruficauda* Swainson, 1838, and hence senior to *aequalicauda* Blyth, 1851. This unused name would thereby become a junior, not a senior synonym, and thus no threat to stability.

SOME COMMENTS ON THE REPORT OF THE COMMITTEE ON TYPIFICATION OF SPECIES OF PROTOZOA. (Z.N.(G.) 185)

By R.B. Williams (*Wellcome Research Laboratories, Berkhamsted, Herts*)

Melville, 1979, presented the report of the committee established by the International Commission on Protozoology to study the problem of typification of protozoal species and enumerated six topics which were discussed. I should like to make some comments which I hope will be useful to scientists considering the implications of that report. Although my examples are drawn largely from the homoxenous coccidia (Apicomplexa: Eimeriidae) they serve to illustrate a wide range of problems in the typification of parasitic protozoans. (Italics used in quotations indicate my own emphases.) The committee's new concept of a hapantotype was further elucidated by Garnham, Bray and Killick-Kendrick, 1979.

2.1. My first comment concerns the committee's definition of a hapantotype (paragraph 5.5), 'individuals taken at one stage in the life cycle and cycled under controlled conditions through the various host species until it is possible to draw off and preserve samples of each stage from a single *strain* which, itself, can continue to exist'. I think that the problem of simultaneously producing a hapantotype consisting of directly related individuals *and* a monospecific strain has not been sufficiently stressed. Joyner, Canning, Long, Rollinson and Williams, 1978, proposed a terminology for populations of coccidia of the genus *Eimeria* at the infrasubspecific level and recommended that '*strains* normally will be established from a *single* oocyst or sporocyst'. It has also been recommended that individual organisms be used to initiate strains of salivarian trypanosomes (Anon., 1978). In other groups of protozoans, a pair of individuals might be needed to initiate a strain, depending on the type of life cycle. It is not necessary to use expensive micromanipulators to isolate individuals. With many protozoans, the medium containing them may simply be diluted progressively until one drop contains one organism.

2.2 It cannot be stressed too strongly that this general principle should be adhered to whenever practicable since, if more than one individual or pair of individuals (whichever appropriate) were used to initiate a strain, a hapantotype derived from it might accidentally consist of more than one species. For example, there has been a great deal of controversy over the question of whether *Eimeria acervulina* Tyzzer, 1929 and *E. mivati* Edgar and Seibold, 1964 constitute the same biological species (Long, 1973; Shirley,

1979). Shirley's 1979 study has shown that these two nominal species are, in fact, valid and that the previous confusion was caused by the use of laboratory 'strains' consisting of mixtures of the two species. This situation could have been avoided by initiating strains with single organisms. There is as much risk of mixed populations arising from the indiscriminate establishment of strains as from the use of heterogeneous cyropreserved material, which was particularly criticized by the committee in paragraph 5.9 of their report. I would suggest that if cloning or some other way of absolutely ensuring the initiation of monospecific strains cannot be carried out, then the designation of a hapantotype should not be attempted and a conventional type should be designated.

3.1 Regarding the use of cryopreserved specimens as a *source* of hapantotypic material (paragraph 5.9), there would seem to be little point in such a procedure if material were readily available directly from a strain being used to establish the biological characteristics of the species but there may well be some situations in which material might have to be cryopreserved pending the designation of a type. However, the use of cryopreserved specimens as *part* of a hapantotype seems to be worthy of consideration. It should be noted that the current amended version of Article 72b(v) of the Code does not preclude the inclusion of *viably* preserved specimens in a hapantotype (see Melville, 1979, p. 207).

3.2 Joyner and Long 1974 described the range of specific characteristics important in the taxonomy of the *Eimeria* species of the fowl, emphasizing the significance of pathogenic effects and immunological specificity. Unfortunately, lesions quickly fade in traditional fixatives and tangible specimens cannot be obtained from the results of cross-immunity tests. Hence, these characteristics cannot be represented in a hapantotype consisting only of *dead* preserved material: *living* specimens need to be available as *stabilates* to provide experimental evidence for differences or similarities between biological characteristics of hapantotypic and other material. Living material is also required to demonstrate a species which can infect different primary hosts and shows variable characteristics in so doing, e.g., *E. dispersa* Tyzzer, 1929 which can infect at least five species of gallinaceous birds (Doran, 1978a, 1978b). A hapantotype made up from nonviably preserved material from one of these hosts might appear very different from another hapantotype of the same biological species infecting a different host: living material would be necessary to carry out host specificity and other tests (as in Doran, 1978b) in order to confirm the conspecificity or otherwise of nominal species. Stabilates removed from cryopreservation for studies to verify an application of a name would not, of course, be returned to the hapantotype; hence replicate stabilates would have to be available. Although it is now known that the species of *Eimeria* infecting chickens can be clearly characterized by isoenzyme techniques (Rollinson, 1975; Shirley, 1975) and the zymograms can be preserved for inclusion in a hapantotype, it should be realized that not all laboratories would have the appropriate facilities and more conventional taxonomic procedures might have to be followed.

3.3 Some of the objections (paragraph 5.9) to the use of frozen material may be answered as follows. There may indeed be variations between the numbers of cells present and their viability and infectivity in each ampoule but there is little significance in this so long as there are some survivors which can initiate infections. Lumsden, 1972, discussing the principles of cryo-

preservation, stated, 'As regards modification of biological characteristics of organisms by the cryopreservation process no clear evidence for this has so far been presented. It appears that cryopreservation is selective in the population in a way *unrelated to its biological variation*'. My own experiences with cryopreserved *Histomonas* and *Eimeria* species bear this out. Regarding mixed populations, these could be avoided if stabilates were established from strains derived as recommended by Joyner *et al.*, 1978.

3.4 The use of frozen material as a viable component of a hapantotype might be criticized on the grounds of the risks associated with the possibility of failure to keep the liquid nitrogen supply topped up. However, there is probably no more risk of this happening than of allowing conventional specimens in spirit to dry out, a not infrequent occurrence in museums. Further information is required on the length of time for which cryopreserved material might remain viable. It should be borne in mind that fixed material of some invertebrate groups may become useless for examination after 50 years or so in spirit.

4.1 The suggestion made in paragraph 5.7 that lesions ('work of an animal' in the sense of the Code) cannot form part of a hapantotype *if they contain no parasites* ('as in the aftermath of *Eimeria necatrix* infections') does not seem logical. None of the examples given in the present Code, p. 154, 'tracks, galls, worm-tubes, borings', necessarily require the presence of the animal originally associated with them. Galls are actually the work of the host in response to parasitic invasion as are parasitic lesions in general. Some lesions are pathognomonic whilst perhaps most are not but they all contribute in some way to the recognition of species. The question of whether lesions can form a useful component of a hapantotype (see paragraph 3.2 of this paper) still must be decided by individual authors.

5.1 Finally, should the concept of a hapantotype be restricted solely to the protozoa? Many phyla include species with several stages of development and, like some protozoa, different biological species might not be distinguishable at every stage of their life cycles. For example the three currently accepted species of *Obelia* (Coelenterata: Hydrozoa) possess indistinguishable medusoid stages. Conversely, in many genera of hydromedusae there is specific diversity of the medusoid generation while the hydroid stage appears uniform (Cornelius, 1975; Russell, 1953). As early as 1864, Allman was stressing the need to define genera and species of Hydrozoa by reference to all stages of the life history. Surely, in the interests of stability of nomenclature, taxonomists working on groups other than Protozoa should be allowed the option of designating hapantotypes when they consider it necessary and practicable. Under the present Code, a worker who, for example, had raised, in the laboratory, planulae, hydroids and medusae of an unknown hydrozoan species would be able to designate only one specimen as the holotype and the rest as paratypes. It would seem more logical to designate all the related stages as a hapantotype.

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COMMENTS ON THE PROPOSED AMENDMENTS TO THE INTERNATIONAL CODE OF ZOOLOGICAL NOMENCLATURE CONCERNING PARANOMENCLATURE. Z.N.(S.)2250

(see vol. 36, pp. 11–14)

By R.W. Huddleston (*Chevron Oil Field Research Company, P.O. Box 446, La Habra, California, U.S.A.*)

While the concept of paranomenclature (as defined in *Bull. zool. Nom.*, vol. 36, pp. 11–14) was designed to afford nomenclatural stability among certain fossil groups, it generates the potential for confusion in other groups, particularly among fossil vertebrates.

The criteria of parataxa rests on an undefined separation between incomplete and more complete fossils, or between names for smaller and larger parts. This presupposes that 'biggest is best' and ignores totally the relative taxonomic diagnosticity of these parts. The smaller parts may contain those elements deemed taxonomically diagnostic, while these same elements may be lacking from the larger, nearly complete specimens. This is particularly common among some fossil vertebrates, especially fossil fishes.

One of the most taxonomically diagnostic elements within the bony structure of fishes is the otolith. Isolated otoliths have been used to identify Recent fish from stomach contents of predators (Fitch & Brownell, 1968, 1972) and from archaeological sites (Fitch, 1969, 1972, 1975; Huddleston & Barker, 1978). The Pleistocene fish fauna of California is almost entirely based on isolated otoliths (Fitch, 1964, 1966, 1970). All of these studies serve as examples of the taxonomic integrity of these elements.

Within California, faunas represented by articulated fossil fish are restricted to rather specialized, deepwater environments of late Miocene age. Faunas based on isolated otoliths are represented in the California Palaeocene, Eocene, Miocene, Pliocene and Pleistocene.

Fossil otoliths are rarely encountered *in situ*, i.e. associated with the fish, but at one locality in California some of the articulated fish retain their otoliths. So far none of these otoliths have been found to be conspecific with isolated otoliths from other deposits. Faunas based on isolated otoliths are far more abundant and continuous in the geologic record than comparable size faunas based on articulated fishes. To restrict the law of priority only to the articulated fishes is unjustified and to restrict the law of priority to isolated otoliths equally incomprehensible.

The current law of priority is quite sufficient to resolve any synonymies that arise without confusing the study of this group.

Under the concept of parataxa, names based on isolated otoliths would be considered parataxonomic and as such their diagnostic and taxonomic values would be obscured and their contributions to paleoichthyologic studies could easily become ignored by students of more complete articulated specimens. Rather than unifying the study of fossil fishes, paranomenclatural concepts would invite an unnecessary proliferation of parataxonomic names for a variety of isolated elements such as scales, teeth, fin spines, vertebral centra, ichthyoliths etc., each becoming a separate field, isolated and possibly oblivious to the effects and information from the other fields.

Parataxa concepts also could have chaotic effects on the study of Palaeozoic fishes which are virtually never complete or articulated. Further confusion could arise in differentiation of taxa and parataxa among Mesozoic and early Tertiary mammals and fossil birds.

I believe that the concept of parataxa and paranomenclature would have an adverse effect and introduce unnecessary confusion in the study of fossil vertebrates. Further I strongly recommend that the concept of parataxa and paranomenclature at least be restricted to non-vertebrate fossils.

ACKNOWLEDGEMENTS

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Reply to Dr Huddleston

By the Secretary, International Commission
on Zoological Nomenclature

The current proposals on paranomenclature seem to have been inadequately expressed. Their intention is not to provide for a separate nomenclature for fragments of any and every kind. I agree that that would lead to chaos. On the other hand, there are whole groups of fossils where a dual taxonomy is a practical necessity, and this dual taxonomy is inevitably expressed in a dual nomenclature. Under Article 24b, such dual nomenclatures are illegal.

It is important to understand exactly how Article 24b applies to such dual nomenclatures. It does not provide that, for instance, all otolith names must yield to all whole-fish names (or to all names based on reasonably complete fossil fish skeletons); it means that, species by species, if the otolith was named first, then its name applies to the whole fish and all of its parts; if the whole fish or any other of its parts was named first, then that name applies to the otolith. The same is true for detached and associated conodonts; for nautiloids and rhyncholites; for holothurians and detached spicules; and so forth.

Article 24b may thus be considered to impose a brake on taxonomy that is *ultra vires* the Code. It compels taxonomists to classify, for example, certain ammonites in the same taxa as their aptychi, even though the taxonomic mismatch between ammonites and aptychi has been a notorious fact for much more than a century. If, for example, a taxonomist wished to set up a classification of fishes based on vertebral centra, he might be thought to be wasting his effort, but he could not be accused of exceeding his rights. As in the cases of conodonts, ammonites and nautiloids, he would undoubtedly produce a taxonomy that would cut across the existing taxonomy of fishes, and he would need to express this using a separate nomenclature. But Article 24b takes no account of his taxonomic needs. It simply and flatly requires that, if a vertebral centrum is named before the whole fish, then its name must be used for the whole fish – and indeed for every fish in which that taxon – that "parataxon" – is found.

It is, after all, only in very recent years that fossil fish otoliths have been attributable with confidence to the same taxa as the whole fishes to which they belong, because even in Recent forms the associations had been published for only a few species. Dr Huddleston is no doubt familiar with the case of the London Clay fish fauna (Casier, 1966, *Faune ichthyologique du London Clay*, London, Brit. Mus., Nat. Hist.). This monograph carries an appendix on the otoliths by F.C. Stinton. The fauna consists of skulls preserved in three dimensions and washed out of the cliffs by wave action; and of otoliths recovered by washing quantities of clay in the laboratory. The following results emerged: of the 58 genera to which the skulls are referred, 52 are extinct; but of the 62 genera to which the otoliths are referred, 60 are extant. Only two genera out of 120 and one species out of 137 appear both in the list of skulls and in the list of otoliths. The differences go further: of 27 families considered by Casier and 40 by Stinton, only 11 are common to both lists. The Scombroids are represented by 24 species in Casier's list and by one (known from four

otoliths) in Stinton's. How far are these differences due to factors of deposition and preservation, and how far to dual taxonomy?

There never has been, there is not now, and there never can be an effective bar to the setting up of fish parataxonomies based on 'isolated elements such as scales, teeth, fin spines, vertebral centra, ichthyoliths, etc.', to quote Dr Huddleston. The purpose of paranomenclature is to allow such parataxonomies to coexist with "standard" taxonomy and with each other without causing nomenclatural chaos. Perhaps Dr Huddleston can say what exactly is the relationship between the taxonomies of fossil and Recent Elasmobranchs?

Many zoologists seem to believe that nomenclature reflects some naturally inherent quality of the animals. However, as Article 1 of the Code shows, it is concerned, not directly with the animals themselves, but with taxonomic concepts. It reflects merely the current ideas of zoologists, collectively and individually, on how the animals are to be ordered for the purposes of communicating ideas about them. On the one hand, it is an instrument whereby taxonomic ideas can be shared and discussed; on the other, it is the mouthpiece of that human logic which rules all human intellectual activity. When, in any given group of animals, dual (or multiple) taxonomies are found to be useful, they will be set up, regardless of any quasi-legal sanctions prohibiting them. When they are not needed, the inherent indolence of humans will inhibit them. When, having been set up, they are found to serve no useful purpose, they will become obsolete. The Commission's task is to frame regulations in the Code that will allow orderly communication to flow through agreed channels in all these sets of circumstances.

COMMENTS ON CRITERIA OF PUBLICATION AND A PETITION TO THE COMMISSION FOR A DEFINITIVE RULING ON THE PUBLICATION VALIDITY OF DISSERTATIONS *ET AL.* Z.N.(S.)2328.

By D. Haman and R.W. Huddleston (*Chevron Oil Field Research Company, P.O. Box 446, La Habra, Calif. 90631*)

A situation was recently encountered where deficiencies in the Criteria of Publication (Chapter 3, Art. 8, 9) as detailed in the draft third edition of the International Code of Zoological Nomenclature were evident.

2. This has prompted us to offer the following comments and to petition the Commission for a definitive declaration on the publication validity of dissertations, theses, and allied works.

Comments on the Criteria of Publication

3. Neave, 1939, (*Nomenclator Zoologicus*, p. vii) observed that there was an 'absence from the International Code of Zoological Nomenclature of any clear definition of what constitutes publication'. The draft third edition of the Code, while attempting to rectify this situation, some 40 years later, has still not defined the criteria of publication with enough precision to satisfy zoologists.

4. Zoologists have already commented on the deficiencies of this chapter in the third edition (see Clark, 1979; Steyskal, 1979). We agree with the views put forward by these scientists particularly with respect to the usage of the imprecise words '*numerous*' and '*multiple*' in Art. 8(2) and Art. 9 (example). Precision with regard to these words is required and new definitions as to the intent and meaning of them in their context must be addressed by the Commission. Steyskal, 1979, raised a legitimate objection to the use of the word '*identical*' (as in Art. 8(2)) which he regarded as too restrictive for the type of copies of articles. He indicated that by definition the use of this word would nullify copies that differed in size, binding, or the nature of material (paper or synthetic sheet). We suggest that the syntax of Art. 8(2) be changed to reflect the need to accommodate greater precision with these terms. We support the *recommendation* by Clark, 1979, that authors be required by mandate to submit a copy of their work to the *Zoological Record* for abstracting, indexing, etc. We strongly support the recommendation by Clark, 1979, that a more rapid method of publication of the *Zoological Record* be explored.

Petition for Definitive Declaration on Publication Validity of Dissertations et al.

5. In the *Zoological Record* (1977, Introduction, p. v), Theses, it is stated 'these are not generally recognized as published in the conventional sense and are not, therefore, included in *Zoological Record*. However, it appears that theses from two sources may meet the requirements of publication (basically that they are printed in ink on paper and available without restrictions)'. The use of the words 'generally', 'conventional', 'may meet', and 'basically' in the above statement makes it valueless from a practical point of view.

6. The draft Code (Arts. 7–9) does not specifically address itself to the publication validity of a dissertation or allied work. The only reference to such a work is in the example following Art. 9(11) which essentially states that a thesis issued publicly for permanent scientific record in a printed or microfiche edition of multiple copies is a valid publication whereas a thesis deposited in a library and only issued in multiple copies as xerox or microfilm is not a publication.

7. This cannot be regarded as a definitive statement, particularly in view of the discussions and comments on the validity of microform for publication (e.g. Crosskey *et al.*, 1977, Durham, 1977, Sarjeant, 1977, Sohn, 1977, Dickins, 1978). Further, as discussed, the use of the word 'multiple' plus the imprecise use of xerox (vs. xerographic) detracts even more from the usefulness of the statement.

8. There exists among certain zoologists the arbitrary point of view that if they have access to a copy of a specific dissertation, thesis etc., they regard it as a valid publication, while on the contrary, those that do not have access to the work arbitrarily reject it as invalid. Thus, due to the lack of a definitive ruling by the Commission the Law of Priority is in danger of degenerating into a "Law of Have or Have Not." Copies of most dissertations can be obtained by one means or another but whether these dissertations can be regarded as 'readily available' is a moot point.

9. If dissertations are to be regarded as publications the Commission must address itself to the question of whether other works pursued towards degrees below the doctorate level, e.g. master, bachelor, diploma, are valid publications. Indeed, one might be forced to consider the validity of 'special project' or 'term' papers. Bearing in mind the literature proliferation in 'accepted' journals the thought of validation of the above, which doubtless contain valuable data, is interesting.

10. The Commission might consider the following. Numerous dissertations are deposited in libraries or distributed privately.

Some dissertations are 'printed' and distributed. These latter dissertations invariably bear the publishing house *imprimatur*. Might the *imprimatur* be considered as a criterion of publication validity?

11. We wish to support the statement by Durham, (1977, p.9) who stated that 'the Commission should give major attention to the goals that need to be satisfied in legal "publication" and try to establish rules which will serve as legal "guidelines" rather than prescribing certain techniques and proscribing others'.

12. In the interests of the Principle of Priority (Art. 23) and in order to elucidate the Criteria of Publication (Arts. 7–9) the International Commission on Zoological Nomenclature is petitioned to:

> Provide a definitive, unequivocal, statement on the publication validity of dissertations *et al.*, irrespective of availability and reproduction criteria.

The following scientists within our Corporation support this petition:

W.H. Akers	J.E. Kilgore
R.C. Blaisdell	B. Kohl
K.D. Berry	W.J. Lewis
E.J. Bolin	D. Mason
F. Bourgeois	M. Polugar
E.W. Christensen	G.S. Robinson
C.S. Collie	N.J. Tartamella
A.E. Dresser	W.P.S. Ventress
W.S. Drugg	P.R. Wesendunk
K.L. Finger	V.D. Wiggins
G.W. Gregory	C.F. Williams

We are indebted to Chevron Oil Field Research Company for permission to submit this petition.

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THAIDIDAE (GASTROPODA): PROPOSED AMENDMENT OF ENTRY IN THE OFFICIAL LIST OF FAMILY-GROUP NAMES IN ZOOLOGY. Z.N.(S.)2307

By W.O. Cernohorsky (*Auckland Institute and Museum, Auckland, New Zealand*).

In Opinion 886 (1969) the Commission placed the family-group name THAIDIDAE Suter, 1912 on the Official List of Family Group names in Zoology, Name No. 439, the original reference being Man. N.Z. Moll: 42.

2. It appears that this will need to be emended in view of the existence of an earlier usage of the name as follows:

THAISIDAE Suter, 1900, *Subantarctic Islands of New Zealand*, Art. 1: 1–57

THAISIDAE Jousseaume, 1888, *Mém. Soc. zool. France* vol. 1: 165–223

3. The International Commission is therefore requested to place on the Official List of Family-Group Names in Zoology THAIDIDAE (correction of THAISIDAE) Jousseaume, 1888, *Mém. Soc. zool. France* vol. 1: 179.

4. I have already mentioned the earlier authorship in *Rec. Auckland Inst. Mus.* Vol. 15: 76, 1978.

5. At the same time, the name THAISIDAE Jousseaume, 1888, should be placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology as an incorrect original spelling of THAIDIDAE.

VOLUTA PAPILIO LINK, 1807 (GASTROPODA): PROPOSED CONSERVATION. Z.N.(S.)1777

By W.O. Cernohorsky (*Auckland Institute and Museum, Auckland, New Zealand*)

Thirteen years ago the author made an application for the suppression as *nomina oblita* of the species-group names *Voluta citrina, V. strigosa* and *V. leucostoma*, all of Gmelin, 1791 (Cernohorsky, 1967b). Continued research has shown *V. strigosa* Gmelin to be a junior synonym of *V. sanguisuga* Linnaeus, 1758, thus rendering a suppression superfluous. *Voluta citrina* Gmelin, 1791, on the other hand, will have to be reinstated into costellarid nomenclature, due to insufficient usage of its junior synonym *Mitra regina* Sowerby, 1828, used only five times in the preceding 50 years.

2. The third name on the list was *Voluta leucostoma* Gmelin, 1791, for a taxon which was described and based on an illustration in Knorr, 1757-72. Both the original description and the illustration in Knorr (*op. cit.*) leave no doubt that *V. leucostoma* Gmelin, 1791, is a forgotten senior synonym of the subsequently described *V. papilio* Link, 1807 (Cernohorsky, 1967a). Menke, 1830, was the only author to have mentioned the name *V. leucostoma* in synonymy of *Mitra scabriuscula* Lamarck, 1811 (= *Voluta papilio* Link, 1807) between 1830 and 1967. Subsequent authors either used the non-binominal species-group name '*Mitra sphaerulata* Martyn, 1784' or the junior synonym *Mitra scabriuscula* Lamarck, 1811, for the species under discussion until Tomlin & Winckworth, 1936, reintroduced *Voluta papilio* into malacological literature during an evaluation of Link's described species. Between 1936 and 1967 the name *Voluta papilio* has been used 17 times by 11 different authors and post-1967 another 13 times by 11 different authors, thus clearly demonstrating the continuous usage of the name *papilio* in malacological literature (see Appendix). *Voluta papilio* Link, 1807, is also the type species of the genus *Neocancilla* Cernohorsky, 1966, family MITRIDAE, which is an added reason for the stabilization of the species-group name.

3. In the interests of stability and universality of nomenclature, and bearing in mind the universal usage of the name *Voluta papilio* during the preceding 50 years, the Commission is requested:

(1) to use its plenary powers to direct that the species-group name *Voluta papilio* Link, 1807, be given precedence over *Voluta leucostoma* Gmelin, 1791, by any zoologist who considers the two taxa to be synonyms;

(2) to place the following specific names on the Official List of Specific Names in Zoology:

(a) *papilio* Link, 1807, as published in the binomen *Voluta papilio*, with an endorsement that it is to be given precedence over *Voluta leucostoma* Gmelin, 1791, whenever the two names are believed to be synonyms.

(b) *leucostoma* Gmelin, 1791, as published in the binomen *Voluta leucostoma*, with an endorsement that it is not to be given priority over *Voluta papilio* Link, 1807, whenever the two names are believed to be synonyms.

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MENKE, C. T. 1830. *Synopsis methodica Molluscorum.* Pyrmont, p. 85.

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APPENDIX

USAGE OF THE NAME VOLUTA PAPILIO LINK, 1807 BETWEEN 1917 AND 1967

1936. *Voluta papilio* Link, Tomlin & Winckworth, *Proc. Malac. Soc. London,* vol. 22, p. 41.

1951 *Mitra papilio* Link, Hirase, Handb. illust. shells Japan, rev. ed. p. 100, pl. 100, fig. 14.

1952 *Mitra papilio* (Link), Kuroda & Habe, *Check-list & Bibl. Mar. Moll. Japan,* p. 67.

1957 *Chrysame papilio* (Link), Kaicher, *Indo-Pacific sea-shells,* pl. 3, fig. 6.

1960 *Mitra* (*Scabricola*) *papilio* (Link), Azuma, *Cat. Moll. Shikoku, Japan* vol. 2, p. 69, pl. 34, fig. 21.

1961 *Scabricola papilio* (Link), Habe, *Col. Illust. shells Japan* vol. 2, p. 69, pl. 34, fig. 21.

1962 *Mitra papilio* Link, Abbott, *Sea shells world*, p. 95, textfig.
1962 *Mitra papilio* (Link), J. Cate, *Veliger* vol. 5(2), p. 83.
1963 *Mitra (Scabricola) papilio* (Link) Shikama, *Select. shells world col.* 1, p. 92, pl. 74, fig. 1.
1964 *Scabricola papilio* (Link), Habe, *Shells west. Pacific col.* vol. 2, p. 109, pl. 34, fig. 21.
1964 *Mitra papilio* (Link), Cate & Burch, *Veliger*, vol. 6(3), p. 144.
1965 *Mitra papilio* (Link), Cernohorsky, *Veliger*, vol. 8(2), p. 93, pl. 14, fig. 22.
1966 *Scabricola papilio* (Link), Habe & Kosuge, *Shells world col.*, vol. 2, p. 78.
1966 *Neocancilla papilio* (Link), Cernohorsky, *Veliger*, vol. 9(2), p. 111, text-fig. 20.
1967 *Neocancilla papilio* (Link), Habe & Kosuge, *Stand. book Jap. shells col.*, vol. 3, p. 86, pl. 33, fig. 25.
1967 *Mitra papilio* (Link), Cernohorsky, *J. Conch.*, vol. 26, p. 170, 173.
1967 *Neocancilla papilio* (Link), Cernohorsky, *Mar. shells Pacific*, vol. 1: 155, pl. 32, fig. 210.

USAGE OF VOLUTA PAPILIO LINK, 1807, POST-1967

1968 *Neocancilla papilio* (Link), Cernohorsky, *J. Conch.*, vol. 26, p. 216.
1969 *Neocancilla papilio* (Link), Cernohorsky, *Rev. suisse Zool.*, vol. 76, p. 962.
1970 *Neocancilla papilio* (Link), Cernohorsky, *Bull. Auckland Inst. Mus.*, No. 8, p. 49, pl. 7, figs. 8, 9.
1971 *Neocancilla papilio* (Link), Kuroda & Habe, *Shells Sagami Bay*, p. 187.
1971 *Neocancilla papilio* (Link), Wilson & Gillett, *Australian Shells*, p.114, pl. 74, figs. 9, 9a.
1972 *Neocancilla papilio* Link, Hinton, *Shells New Guinea & Indo-Pacific*, p. 44, pl. 22, fig. 15.
1974 *Mitra papilio* Link, Dance, *Encycl. shells, p. 175.*
1975 *Neocancilla papilio* (Link), Salvat & Rives, *Coquill. Polynésie*, p. 337, fig. 290.
1975 *Neocancilla papilio* Link, Oliver, *Shells world*, p. 224, textfig.
1975 *Mitra (Scabricola) papilio* [sic] (Link), Tchang Si, *Studia Marina Sinica*, (10), p. 125, pl. 5. fig. 9.
1976 *Neocancilla papilio* (Link), Cernohorsky, *Indo-Pacific Moll.*, vol. 3, p. 276, fig. 7.
1978 *Neocancilla papilio* Link, Hinton, *Guide shells Papua New Guinea*, p. 41, pl. 41, figs. 7, 7a.
1978 *Neocancilla papilio* Link, Hinton, *Guide Austral. shells*, p. 51, pl. 51.

ANTILOPE ZEBRA GRAY, 1838 (MAMMALIA) REVISED PROPOSALS FOR CONSERVATION. Z.N.(S.)1908

By W.F.H. Ansell (*Zennor, St. Ives, Cornwall, U.K.*)

In 1970 (*Bull. zool. Nom.* vol. 27, p. 104) I applied to the Commission to place the specific name *zebra* Gray, 1838, as published in the binomen *Antilope zebra*, on the Official List of Specific Names in Zoology. My case, which rested on references to current use of that name for the Zebra Duiker, was contested by Kuhn (vol. 28, pp. 14–15) who cited 19th century use of *Antilope doria* Ogilby, 1837 for that species. He had in fact revived the use of the latter name in his own work, against the majority of contemporary users, and in spite of the clear evidence in Ogilby's works that *A. doria* is a junior objective synonym of *Antilope mhorr* Bennett, 1833, a species of gazelle.

2. The difference between me and Dr Kuhn on the above point can be overcome by a ruling that *Antilope zebra* Gray, 1838 is to be given precedence over *Antilope doria* Ogilby, 1837 whenever the two names are regarded as synonyms. Dr Kuhn also, however, mentioned another senior synonym of *A. zebra* in his comment. This is *Antilope zebrata* Robert, 1836, and as the source of this name is obscure (and the name completely overlooked), I quote it here.

3. In *L'Echo du Monde Savant* for Sunday 1 May 1836 the editor, P.L.F. Gervais, said that he had already reported various geological and botanical observations made by Eugène Robert in Iceland and Senegal, and said: 'Nous donnerons dans la Notice qui va suivre l'exposé de quelques observations zoologiques faites au Sénégal par le même voyageur'. The third paragraph of these observations reads: 'Parmi les peaux destinés au commerce et qui provenaient de chasses dans le haut Sénégal, M. Robert signale, pour attirer l'attention des naturalistes-voyageurs sur l'animal auquel il appartient, une peau qui est évidemment d'antilope, mais qui, ayant été préparée, n'a pu fournir toutes les données qu'on aurait pu désirer. Cette peau, qui semble appartenir à une espèce de la taille des corinnes, est d'une couleur fauve-dorée avec dix ou onze bandes transversales brunes sur le dos. Ce système de coloration a bien quelque chose de celui du zèbre, d'où le nom d'*Antilope zebrata* par lequel M. Robert désigne provisoirement l'intéressant mammifère qu'il indique aux naturalistes; mais il rappelle encore mieux, sauf la teinte, celui des Thylacies, espèces de didelphes carnivores que Harris a le premier fait connaître et que pendant longtemps on a nommés *Didelphis cynocephala*.'

4. The vivid comparison with the quite unrelated marsupial wolf shows clearly that the Zebra Duiker is meant, for it resembles in those respects the marsupial wolf more closely than any other striped mammal. Although Allen (1939, *Bull. Mus. comp. Zool. Harvard*, vol. 83, p. 489) ascribed the name to Gervais, it is clear that he was merely the editor and publisher (French: *éditeur*), and that both the name and the *observations* that make it available were provided by Robert and therefore that he, under Article 50, is the author of the name. It has never since, so far as I know, been used as a valid name.

5. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers

(a) to suppress the specific name *zebrata* Robert, 1836, as published in the binomen *Antilope zebrata*, for the purposes of the Law of Priority but not for those of the Law of Homonymy;

(b) to rule that the specific name *zebra* Gray, 1838, as published in the binomen *Antilope zebra*, is to be given precedence over the specific name *doria* Ogilby, 1837, as published in the binomen *Antilope doria*, whenever the two names are considered synonyms;

(2) to place on the Official List of Specific Names in Zoology:

(a) *zebra* Gray, 1838, as published in the binomen *Antilope zebra*, with an endorsement that it is to be given precedence over *doria* Ogilby, 1837, as published in the binomen *Antilope doria*, whenever the two are considered synonyms;

(b) *doria* Ogilby, 1837, as published in the binomen *Antilope doria*, with an endorsement that it is not to be given priority over *zebra* Gray, 1838, as published in the binomen *Antilope zebra*, whenever the two names are considered synonyms;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology *zebrata* Robert, 1836, as published in the binomen *Antilope zebrata*, and as suppressed under the plenary powers in (1) (a) above.

SPHINX TIPULIFORMIS CLERCK, 1759 (INSECTA, LEPIDOPTERA): PROPOSED CONSERVATION Z.N.(S.)2138

By N.P. Kristensen (*Universitetets Zoologiske Museum, Universitetsparken 15, DK-2100 Copenhagen Ø, Denmark*)

The aim of this application is to seek confirmation of the protection of the specific name *tipuliformis* Clerck, 1759 *(Sphinx)*, which name has recently been set aside by Bradley, Fletcher & Whalley, 1972, in favour of the totally forgotten name *salmachus* Linnaeus, 1758 (*Sphinx*).

2. *Sphinx salmachus* was described by Linnaeus, 1758, p. 493; to my knowledge it has subsequently been used as a valid species name only once, viz. by Hufnagel, 1766, p. 188, until it was re-introduced by Bradley, Fletcher & Whalley, 1972, p. 11.

3. *Sphinx tipuliformis* was described by Linnaeus's compatriot Clerck, 1759, pl. 9, fig. 1. Linnaeus, 1761, p. 289, adopted Clerck's name in preference to *salmachus* and subsequently in later editions of *Systema Naturae*. Consequently Rottemburg, 1775, p. 106, wrote in his comments to Hufnagel's table: 'No. 19. Sph. Salmachus. Es ist dieses der *Sphinx Tipuliformis* Linnei'.

4. The fact that the synonymy between the specific names *salmachus* Linnaeus, 1758 (*Sphinx*) and *tipuliformis* Clerck, 1759 (Sphinx) was established by Linnaeus himself, is the best obtainable confirmation of its correctness.

5. The species in question is common and widespread in the palaearctic region, and following accidental introduction it has become established in N. America, Australia and New Zealand. It belongs to a rather intensively studied group of moths and moreover, due to its larval habits as a stem-borer in various Ribesiaceae, it is of frequent occurrence as a horticultural pest. Consequently the literature (pure and applied) concerning the species is very large; already more than half a century ago Dalla Torre & Strand, 1922, pp. 51–55, list about 200 entries under *tipuliformis*.

6. Important usages of *tipuliformis* Clerck (sometimes misspelled *tipulaeformis* or *tipuliforme*) from within the last 50 years include, e.g., Meyrick, 1927, p. 696; Gaede, 1929, p. 83; Hering, 1932, p. 171; Nordström & Wahlgren, 1941, p. 335; Engelhardt, 1946, p. 41; Popescu-Gorj *et al.*, 1958, p. 94; Forster & Wohlfahrt, 1960, p. 211; Hoffmeyer, 1960, p. 223; Nordström *et al.*, 1961, p. 57; Edelsten *et al.*, 1961, p. 343.

7. On the basis of the above facts and in accordance with Articles 23a-b and 79b, the Commission is requested:

(1) to use its plenary powers to suppress the specific name *salmachus* Linnaeus, 1758, as published in the combination *Sphinx salmachus*, for the purposes of the Law of Priority but not for those of the Law of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the name *tipuliformis* Clerck, 1759, as published in the combination *Sphinx tipuliformis*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *salmachus* Linnaeus, 1758, as published in the combination *Sphinx salmachus* and as suppressed for the purposes of the Law of Priority in (1) above.

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SESIA ANDRENAEFORMIS LASPEYRES, 1801 (INSECTA, LEPIDOPTERA): PROPOSED CONSERVATION Z.N.(S.)2139

By N.P. Kristensen (*Universitetets Zoologiske Museum, Universitetsparken 15, DK-2100 Copenhagen Ø, Denmark*)

The aim of this application is to seek confirmation of the protection of the specific name *andrenaeformis* Laspeyres, 1801 (*Sesia*), which name has recently been set aside by Bradley, Fletcher & Whalley, 1972, in favour of the totally forgotten name *anthraciniformis* Esper, 1798 (*Sphinx*).

2. *Sphinx anthraciniformis* was described by Esper on p.29 in the Supplement Band (2 Abschn.) Abendschmetterlinge of his *Die Schmetterlinge in Abbildungen nach der Natur mit Beschreibungen.* There has been some confusion concerning the date of publication of the name. Dalla Torre & Strand, 1922, p. 11, stated the description to be "post 1801", but Sherborn & Woodward, 1901, p. 140, have provided evidence that the pages 17–40 of the work in question were probably published in 1797 (quoting from Esper's p. 32 the words "im abgewichenen 1797 Jahre"). In Sherborn, 1902, p. 57, the name *anthraciniformis* was dated 1798 (in square brackets, indicating the uncertainty) and this dating was accepted by Bradley, Fletcher & Whalley, 1972.

3. I am not aware that the specific name *anthraciniformis* has been used in the original spelling until it was re-introduced by Bradley, Fletcher & Whalley, 1972, p. 11, but in the misspelled version *anthraciformis* it was applied as a valid species name by a number of authors in the nineteenth century, probably latest by Boisduval, 1874, p. 398. The references to usages by, and after, Rouast, 1883, given by Dalla Torre & Strand, 1922, p. 11, are erroneous; they concern a Mediterranean species, *Sesia anthraciformis* Rambur, 1832, now referred to the genus *Chamaesphecia* (s. lat.).

4. *Sesia andrenaeformis* was described by Laspeyres in 1801; the name has been used as a valid species name by the majority of subsequent authors.

5. The species in question is generally local and uncommon (it is distributed from southern England through central Europe to Asia Minor and central USSR), but since it belongs to a rather intensively studied group of moths it has been treated in a considerable literature. References to important usages of *andrenaeformis* within the last 50 years include, e.g. Meyrick, 1928, p. 697, misspelled *andreniformis*; Hering, 1932, p. 171; Gaede, 1933, p. 232; Lhomme, 1935–49, p. 514; Bergmann, 1953, p. 489; Gozmany, 1955, p. 44; Popescu-Gorj *et al.*, 1958, p. 80; Forster & Wohlfahrt, 1960, p. 210; Edelsten *et al.*, 1961, p. 342; Schnaider *et al.*, 1961, p. 26.

6. On the basis of the above facts and in accordance with Articles 23a-b and 79b, I herewith request the Commission:

(1) to use its plenary powers to suppress the specific name *anthraciniformis* Esper, 1798, as published in the binomen *Sphinx anthraciniformis*, for the purposes of the Law of Priority but not for those of the Law of Homonymy;

(2) to place on the Official List of Specific Names in Zoology the name *andrenaeformis* Laspeyres, 1801, as published in the binomen *Sesia andrenaeformis;*

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *anthraciniformis* Esper, 1798, as published in the combination *Sphinx anthraciniformis,* and suppressed for the purposes of the Law of Priority in (1) above.

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PROPOSED USE OF THE PLENARY POWERS TO VALIDATE *CHERMES FUSCA* ZETTERSTEDT, 1828, A JUNIOR SECONDARY HOMONYM IN *PSYLLA* GEOFFROY, 1762 (INSECTA, HOMOPTERA). Z.N.(S.)2149

By Pavel Lauterer (*Moravian Museum, Brno, Czechoslovakia*)

I propose that the International Commission on Zoological Nomenclature rule that the specific name *fusca* Zetterstedt, 1828, as published in the binomen *Chermes fusca,* is to be preferred to the specific name *fusca* Geoffroy, 1785, *in* Fourcroy, 1785, as published in the binomen *Psylla fusca,* whenever those names are combined with the generic name *Psylla* Geoffroy, 1762. The details of the case are set out below.

2. As *Psylla fusca* Geoffroy in Fourcroy, 1785, p. 224, described an inadequately defined species, the name of which can only be regarded as a *nomen dubium.* Moreover, only parts of Geoffroy's collection survive – the Coleoptera and part of the Lepidoptera – in the Musée d'Histoire Naturelle at Autun, and in the Muséum National d'Histoire Naturelle in Paris. Another part of the collection, including the type of *P. fusca,* was deposited in an unnamed small museum in Paris (not the Muséum National d' Histoire Naturelle), as ascertained from archival records by the curator of the Musée d'Histoire Naturelle at Autun, and was in very bad condition already in the last century. No reports on this part of the collection are available in the present century, and my search for it has been fruitless. Thus it appears nearly certain that the type material of *Psylla fusca* Geoffroy has not been preserved.

3. Geoffroy's description of *Psylla fusca* reads: '8. *P. fusca.* La Psylle brune à antennes sétacées et ailes nerveuses. Long. 1½ lig. Larg. ⅔ lig. P. fusca, antennis setaceis laevibus, alis nervosis.' This, as well as his description of several other species of *Psylla* in Fourcroy's work, suggests a species of Psocoptera rather than PSYLLOIDEA, as was pointed out by Loew (1882). *Psylla fusca* Geoffroy, 1785, has eluded the attention of subsequent specialists and has not been recorded, even for the purposes of homonymy, in the basic catalogues of the PSYLLOIDEA (Oshanin, 1912; Aulmann, 1913; Klimaszewski, 1973), or in any catalogue of the Psocoptera.

4. *Chermes fusca* Zetterstedt, 1828, p. 552 was transferred to *Psylla* by Reuter, 1881, p. 160 and Loew, 1882, p. 239, independently. The binomen *Psylla fusca* (Zetterstedt) has been used unequivocally throughout the literature ever since. As a junior

secondary homonym of *Psylla fusca* Geoffroy, 1785, it should be replaced by its junior subjective synonym *Psylla perspicillata* Flor, 1861. This replacing was published by Lauterer, 1976, p. 115 with note, that he is simultaneously proposing to the International Commission on Zoological Nomenclature to validate the name *Psylla fusca* (Zetterstedt) and suppress the name *Psylla fusca* Geoffroy, 1785. Otherwise, that name was not only not proposed as a replacement name for *P. fusca* (Zetterstedt), it was not so used on the only subsequent occasion when it was cited as a valid name (Reuter, 1876, *Meddn Soc. Fauna Flora fenn.*, vol. 1, p. 71). Otherwise it has been completely overlooked and was not even listed by Klimaszewski, 1973.

5. The binomen *Psylla fusca* (Zetterstedt) has been used for nearly 100 years in dozens of papers to denote a common European species (15 papers by a dozen authors are listed in the Appendix); its first junior subjective synonym has not been used as a valid name for over 100 years; its senior secondary homonym, *Psylla fusca* Geoffroy, 1785, is a *nomen dubium* which may apply to a Psocopteran species, and which should be prevented from applying to a species of the PSYLLOIDEA.

6. The International Commission on Zoological Nomenclature is therefore asked:

(1) to use its plenary powers to rule that the specific name *fusca* Geoffroy *in* Fourcroy, 1785, as published in the binomen *Psylla fusca,* is not to be used in preference to the specific name *fusca* Zetterstedt, 1828, as published in the binomen *Chermes fusca*, whenever those names are combined with the generic name *Psylla* Geoffroy, 1762;

(2) to place on the Official List of Specific Names in Zoology:

(a) the specific name *fusca* Zetterstedt, 1828, as published in the binomen *Chermes fusca*, with an endorsement that it is to be preferred to the specific name *fusca* Geoffroy, *in* Fourcroy, 1785, as published in the binomen *Psylla fusca*, whenever those names are combined with the generic name *Psylla* Geoffroy, 1762;

(b) the specific name *fusca* Geoffroy in Fourcroy, 1785, as published in the binomen *Psylla fusca,* with an endorsement that it is not to be used in preference to the specific name *fusca* Zetterstedt, 1828, as published in the binomen *Chermes fusca*, whenever those names are combined with the generic name *Psylla* Geoffroy, 1762.

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LAMPROCABERA INOQUE, 1958 (INSECTA, LEPIDOPTERA): PROPOSED DESIGNATION OF TYPE SPECIES BY USE OF THE PLENARY POWERS. Z.N.(S.)2160.

By H. Inoue (*Biological Laboratory, Otsuma Woman's University, Sanbancho, Chiyodaku, Tokyo, Japan*).

The object of the present application is to request the use of the plenary powers under Article 70 of the Code in the case of a misidentified type species.

2. The generic name *Lamprocabera* Inoue, 1958 (*Tinea* vol. 4, p. 253) was established in the family GEOMETRIDAE having *Deilinia punctata* Warren, 1894 (*Novit. zool.* vol. 1, p. 405) as the type species by original designation. The generic diagnosis of *Lamprocabera* and the type-species designation were based on specimens in my collection determined as *Deilinia punctata* Warren, 1894, then believed to be a senior subjective synonym of *Bapta candidaria* Leech, 1897 (*Ann. Mag. nat. Hist.* (6) vol. 19, p. 198). These nominal species were synonymized by Swinhoe, 1902 (*Trans. ent. Soc. London.* vol. for 1902, p. 63) and the synonymy was followed by other authors, including Prout, 1915, (*in* Seitz, *Gross-Schmett. Erde* vol. 4, p. 318, pl. 15, row g [figure of *candidaria*, as *punctata* on legend]);

3. In 1973 I examined the type specimens of *Deilinia punctata* Warren and *Bapta candidaria* Leech at the British Museum (Natural History) in London. The study revealed that:

(i) *Deilinia punctata* Warren and *Bapta candidaria* Leech are not subjective synonyms, as had been previously thought, and that they belong to different genera.

(ii) *Deilinia punctata* is congeneric with *Myrteta planaria* Walker, 1861 (*List Specimens lepid. Insects Colln Br. Mus.* vol. 23, p. 831), the type species of *Myrteta* Walker, 1861.

(iii) The specimens in my collection determined as *Deilinia punctata* Warren had been misidentified and should be determined as *Bapta candidaria* Leech.

4. If the original designation is set aside and the type species is then designated as *Bapta candidaria* Leech, 1897 (= *Deilinia punctata* Warren sensu Inoue, 1958), the use of the generic name *Lamprocabera* Inoue, 1958, for *Bapta candidaria* can be maintained.

5. If the original designation is sustained then *Lamprocabera* Inoue would become a junior subjective synonym of *Myrteta* Walker, 1861, and a new generic name would have to be

established for *Bapta candidaria* Leech.

6. Since 1958 *Lamprocabera* Inoue, 1958, has been used in Japan for *Deilinia punctata* sensu Inoue (1958, *in* Esaki *et al.*, 1959, *Icones Heterocerorum Japonicorum in Coloribus naturalibus*) and has become a widely used generic name in Japan.

7. In view of the facts outlined above, the International Commission on Zoological Nomenclature is requested:

(1) to use its plenary powers to set aside the original designation of type species for the genus *Lamprocabera* Inoue, 1958, and then to designate *Bapta candidaria* Leech, 1897, as the type species;

(2) to place on the Official List of Generic Names in Zoology the generic name *Lamprocabera* Inoue, 1958 (gender: feminine), type species, by designation under the plenary powers in (1) above, *Bapta candidaria* Leech, 1897;

(3) to place on the Official List of Specific Names in Zoology the specific name *candidaria* Leech, 1897, as published in the binomen *Bapta candidaria* (specific name of the type species of *Lamprocabera* Inoue, 1958).

CALAMOECIA AUSTRALICA SARS, 1908 AND *CALAMOECIA AUSTRALIS* (SEARLE, 1911) (CRUSTACEA, COPEPODA): PROPOSALS TO REMOVE THE CONFUSION. Z.N.(S.)2242

By I.A.E. Bayly (*Zoology Department, Monash University, Clayton, Victoria 3168, Australia*)

In 1955 Jolly (*Hydrobiologia* vol. 7(3), pp. 279–284) synonymised *Brunella* Smith, 1909, *Trans. linn. Soc. London* (2) Zool. vol. 11(4), p. 87 with *Calamoecia* Brady, 1906, *Proc. zool. Soc. London* for 1906, p. 696 and this was accepted by subsequent authors including Bayly, 1961, *Australian J. mar. freshwat. Res.* vol. 12, pp. 54–91; 1962, *ibid.*, vol. 13, pp. 252–264; 1979, *ibid.*, vol. 30, pp. 103–127; 1973, *Bull. austr. Soc. Limnol.* vol. 5, pp. 41–42. The genus *Calamoecia* thus came to contain (among other species) both *Calamoecia australica* Sars, 1908, *Arch. math. Naturvidensk.* vol. 29(7), p. 12 and *Calamoecia australis* (Searle, 1911) *Victorian Nat.* vol. 27, p. 176, the latter having been first described as a species of *Brunella*. The obvious potential for confusion is increased by the fact that the two species have contiguous distributions in the inland waters of the State of Victoria, Australia.

2. In 1973 Bayly proposed that these two specific names should be treated as secondary homonyms and that *Brunella expansa* Sars, 1912 should be adopted in place of *C. australis* (Searle). However, there is no homonymy involved. The present application therefore seeks to place that proposal on a proper footing.

3. It is possible that *Brunella viridis* Searle, 1911, *Victorian Nat.* vol. 27, p. 177, which was published simultaneously with *B. australis*, might be regarded as a synonym of the latter and, being senior to *B. expansa* Sars, 1912, be brought forward as a replacement name. Bayly (1961) showed, however, that the holotype of *B. viridis* is so damaged as to be indeterminable and that Searle's description is inadequate. *B. viridis* is therefore best regarded as a *nomen dubium*; and while it would be inconsistent with that view to treat *australis* as a synonym of *B. viridis* and select it as the valid name under Article 24a, it is important to ensure that such action cannot be taken in favour of *B. viridis*.

4. The syntypes of *Brunella expansa* Sars, 1912, are preserved in the Zoological Museum of the University of Oslo and are in excellent condition. I am grateful to Dr. Marit E. Christiansen for examining them and on her advice I hereby designate specimen number F.17088a as lectotype. The species was first described by

Sars in *Arch. Math. Naturvidensk.* vol. 32 (13), pp, 9–10, 1912.

5. The International Commission on Zoological Nomenclature is accordingly requested:

(1) to use its plenary powers to suppress the following specific names for the purposes of the Law of Priority but not for those of the Law of Homonymy:
   (a) *australis* Searle, 1911, as published in the binomen *Brunella australis*;
   (b) *viridis* Searle, 1911, as published in the binomen *Brunella viridis*;

(2) to place the following specific names on the Official List of Specific Names in Zoology:
   (a) *australica* Sars, 1908, as published in the binomen *Calamoecia australica*;
   (b) *expansa* Sars, 1912, as published in the binomen *Brunella expansa*;

(3) to place the following specific names, as suppressed under the plenary powers in (1) above, on the Official Index of Rejected and Invalid Specific Names in Zoology:
   (a) *australis* Searle, 1911, as published in the binomen *Brunella australis*;
   (b) *viridis* Searle, 1911, as published in the binomen *Brunella viridis*.

PAPILIONIDAE (INSECTA, LEPIDOPTERA): REQUEST FOR REVISION OF THE OFFICIAL LIST. Z.N.(S.)2245

By Lieut. Col. C.F. Cowan (*4 Thornfield Terrace, Grange-over-Sands, Cumbria, LA11 7DR, England*)

PAPILIONIDAE [Leach], [1815] is name number 233 on the *Official List of Family-Group Names in Zoology*. It was so placed in 1958 by Direction 99 after the ruling by Opinion 278 that *Papilio machaon* Linnaeus, 1758 should be the type species of the genus *Papilio* Linnaeus, 1758. No earlier Family-Group Names were then suppressed, nor even considered.

2. Latreille, [1802] (*in* Sonnini's Buffon, 14 volumes, 1801–1805), *Hist. nat. gén. Partic. Crust. Ins.* vol. 3, pp. 387–418 was the first author to classify the Lepidoptera in the orthodox way by families named after included genera, and three of his six families are already on the *Official List*. His text was in French, with "latinised" scientific names added in italics down to the generic level. Only the latter are mentioned here. His classification was:–

	Family	Included genera
1.	PAPILIONIDES	*Papilio* (in 7 infra-generic groups) + *Hesperia*
2.	SPHINGIDES	*Sphinx* + 4 other genera
3.	BOMBYCINAE	*Bombyx* (in 6 infra-generic groups) + 3 genera
4.	PHALAENITES	*Phalaena* + 4 other genera
5.	TORTRICES	eight genera
6.	PTEROPHORII	*Pterophorus* and *Orneodes*

Of these six, PHALAENITES (founded on a since suppressed generic name) has been rejected, while SPHINGIDAE (name number 89), BOMBYCIDAE (number 135) and TORTRICIDAE (number 138) are already on the *Official List*, credited to Latreille in this work. But, as noted in the opening paragraph above, PAPILIONIDAE is not. Latreille's proposal of it, with diagnosis of the family and of the genus *Papilio* (on p. 387), and including *Papilio machaon* in his first infra-generic group (p. 388), is absolutely valid and should be recognised.

3. The International Commission is accordingly requested to:–

(1) delete the existing entry for Name Number 233 in the *Official List of Family-Group Names in Zoology* and, having done so,

(2) place on the *Official List of Family-Group Names in Zoology* the Family-Group Name PAPILIONIDAE (Correction of PAPILIONIDES) Latreille, [1802] *(in* Sonnini Suite à Buffon), *Hist. nat. gén. partic. Crust. Ins.* vol. 3, p. 387, type-genus *Papilio* Linnaeus, 1758, and

(3) place on the *Official Index of rejected and invalid Family-Group Names in Zoology* the name PAPILIONIDES Latreille, [1802] *(in* Sonnini, Suite à Buffon), *Hist. nat. gén partic. Crust. Ins.* vol. 3, p. 387, incorrect original spelling of PAPILIONIDAE.

[NOTE:– The date of Latreille's work cited above has usually been cited as "[1803]" following Griffin, 1938, *J. Soc. Biblphy nat. Hist.* vol. 1(5), p. 157. I am indebted to Professor Cl. Dupuis for directing my attention to the *Journal typographique et bibliographique,* 6e année, No. VI, 15 Brumaire, an 11, i.e. [6 November, 1802], where the publication of Latreille's work is announced.]

PTINELLA MOTSCHULSKY, 1844 AND *NEPHANES* THOMSON, 1859: REQUEST FOR CONSERVATION (INSECTA, COLEOPTERA). Z.N.(S.)2258

By Olof Biström (*Zoological Museum of the University, Helsinki, Finland*)

Motschulsky (1844, p. 819) described the genus *Ptinella*. He included in the genus five species. Of these, *P. canaliculata* Märkel and *P. formicaria* Motschulsky have never since been used as valid names and their identity is unknown. *P. bicolor* Motschulsky, 1844, p. 820 is listed by Cziki (1911) as *P. bicolor* Motschulsky, 1845, p. 512 in the synonymy of *Pteryx suturalis* (Heer, 1841, p. 375) and *P. haemorrhoidale* Motschulsky, 1844, p. 820 is listed by Cziki (1911) as *P. haemorrhoidale* Motschulsky, 1845, p. 508 in the synonymy of *Ptilium myrmecophilum* (Allibert, 1844, p. 53). *P. minutissima* Weber is nowadays known as *Ptilium minutissimum* (Ljungh, 1804, p. 64) according to Cziki (1911). The attribution to Weber was simply a case of mistaken authorship. None of the species are at present included in the genus *Ptinella*. Yet one of them should be designated as type species. Later Motschulsky (1845) gave a more detailed description of the genus. Then he also included *Ptinella aptera* (described as *Ptilium apterum* Guérin-Méneville, 1839, p. 621).

2. Gistl (1857) introduced the name *Cleopterium* and described three species in it. They are all listed as synonyms of *Ptinella aptera* by Cziki (1911).

3. Thomson (1859) described the genus *Neuglenes* and he designated *Ptilium apterum* Guér. to be the type species for it. For a while this name was used (e.g. Flach, 1889), but not during this century. Matthews (1872) synonymized *Neuglenes* with *Ptinella*.

4. After Matthews (1862 and 1872) and Motschulsky (1868) the name *Ptinella* began to cover the same species as it does today. The generic name has been universally used during the twentieth century.

5. Matthews (1858, p. 6108) described the genus *Titan* with *Trichopteryx abbreviatella* Heer, 1841 (= *Trichopteryx titan* Newman, 1834, p. 201) as the type species for the genus. Later (Matthews, 1860) he believed that this generic name was preoccupied by *Titanus* Audinet-Serville, 1832 and he replaced it with the name *Elachys*. In fact no homonymy exists here.

6. The generic name *Nephanes* was introduced by Thomson (1859, p. 62) who designated *Trichopteryx abbreviatella* Heer, 1841 (=*Trichopteryx titan* Newm.) to be the type species for

the genus. After Thomson the name *Nephanes* was used by several authors, such as Matthews (1872), Flach (1889) and Reitter (1909). The name has been universally used for a century, although it is in fact a junior objective synonym of the name *Titan* Matth.

7. Under the rules there is a threat to current use of the names *Ptinella* and *Nephanes* – current use exemplified by Sainte-Claire Deville (1935), Horion (1949), Hatch (1957), Lindroth (1960), Arnett (1961), Hansen (1964), Kryzhanovskij (1965), Besuchet (1971), Johnson (1975) and Pope (1977). To preserve current use I suggest that the Commission designate *Ptilium apterum* to be the type species of *Ptinella*, and suppress *Titan* as an unused senior synonym of *Nephanes*.

The International Commission on Zoological Nomenclature is therefore requested:

(1) to use its plenary powers to set aside all designations of type species for the genus *Ptinella* Motschulsky, 1844, and, having done so,
  (a) to designate *Ptilium apterum* Guérin-Méneville, 1839 to be the type species of that genus;
  (b) to suppress the generic name *Titan* Matthews, 1858 (type species: *Trichopteryx abbreviatella* Heer, 1841) for the purposes of the Law of Priority but not for those of the Law of Homonymy;

(2) to place on the Official List of Generic Names in Zoology
  (a) *Ptinella* Motschulsky 1844 (gender: feminine), type species as designated under (1) above, *Ptilium apterum* Guérin-Méneville, 1839;
  (b) *Nephanes* Thomson, 1859 (gender: feminine), type species by original designation, *Trichopteryx abbreviatella* Heer, 1841 (= *Trichopteryx titan* Newman, 1834);

(3) to place on the Official List of Specific Names in Zoology
  (a) *apterum* Guérin-Méneville, 1839 as published in the binomen *Ptilium apterum* (specific name of type species of the genus *Ptinella* Motschulsky, 1844);
  (b) *titan* Newman, 1834 as published in the binomen *Trichopteryx titan* (senior synonym of *Trichopteryx abbreviatella* Heer, 1841, the specific name of the type species of *Nephanes* Thomson, 1859);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Titan* Matthews, 1848; suppressed under (1) (b) above.

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APHIS CALLUNAE THEOBALD, 1915: PROPOSED CONSERVATION UNDER THE PLENARY POWERS (INSECTA, APHIDOIDEA). Z.N.(S.)2283

By H.L.G. Stroyan (*Ministry of Agriculture, Fisheries and Food, Plant Pathology Laboratory, Harpenden, Herts.*)

1. Francis Walker (1852, *List of the Specimens of Homopterous Insects in the Collection of the British Museum*, vol. 4, p. 1039) described a new aphid species *Aphis betulina* from England, without indicating a host plant except in so far as the specific epithet that he gave to it suggested an association with birch (*Betula*). He enumerated no specimens, and described only the winged viviparous female morph.

2. *Aphis betulina* Walker has at no time been used as the valid name of a taxon in primary literature from 1852 until the present day, and no author has claimed to recognize it.

3. John Doncaster (1961, *Francis Walker's Aphids*, p. 36) cited the original description of *Aphis betulina* and regarded it as a *nomen dubium*, stating that no material whereby the species might be recognized had been found in any of the collections of Walker material then known. These known collections were listed in another part of the same work (*ibid.*, p. 4).

4. F.V. Theobald (1915, *Entomologist*, vol. 48, pp. 260–261) described a new aphid species *Aphis callunae* from *Calluna vulgaris* (L.) Hull in the New Forest, England. Type material is extant in the collection of the British Museum (Natural History), London.

5. *Aphis callunae* Theobald is well known to European aphidologists, and has been discussed or referred to under this name by the following authors during the last 50 years:

(1) Hille Ris Lambers, D., 1934. Notes on Theobald's 'The Plant-lice or Aphididae of Great Britain'. *Stylops*, vol. 3, p. 28.

(2) Jacob, F.H., 1948. An account of a 'Black Aphid', *Aphis ulicis* Walker, 1870. *Proc. R. ent. Soc. Lond.* (B) vol. 17, pp. 60–61.

(3) Fidler, J.H., 1951. *Aphis vaccinii* (Börner) new to the British Isles. A redescription and comparison with *Aphis callunae* Theobald. *Proc. R. Ent. Soc. Lond.* (B) vol. 20, p. 37–43.

(4) Börner, C., 1952. Europae centralis Aphides. *Mitt. thüring. bot. Ges. Beiheft* 3, 1. Lieferung, p. 84.

(5) Stroyan, H.L.G., 1958. Aphids in Wales. *Nature in Wales*, 1958, p. 782.
(6) Ossiannilsson, F., 1959. Contributions to the knowledge of Swedish aphids. II. List of species with find records and ecological notes. *Kungl. Lantbrukshögsk. Annlr*, vol. 25, p. 431.
(7) Huculak, S., 1966. Mszyce Pojezierza Mazurskiego, II. *Fragmenta faunistica*, vol. 13, p. 119.
(8) Szelegiewicz, H., 1966. Ergänzungen zur Blattlausfauna Polens. *Fragmenta faunistica*, vol. 12, p. 435.
(9) ___1968. Aphidodea in *Catalogus Faunae Poloniae*, vol. 21(4) p. 87.
(10) Eastop, V.F. & Hille Ris Lambers, D., 1976. *Survey of the World's Aphids*, p. 46
(11) Wood-Baker, C.S., 1976. Biometric data for *Aphis callunae* Theobald in Britain. *Entomologist's monthly Magazine*, vol. 111, pp. 237–238.
(12) Müller, F.P., 1976. Faunistisch-ökologische Beobachtungen über Aphiden im Küstenbereich des Bezirkes Rostock. *Wiss. Z. W-Pieck-Univ. Rostock*, vol. 25, p. 284.

6. Since 1961 two further collections of Walker aphid material have come to light and been reported upon: one in Belfast (Stroyan, 1973, *J. nat. Hist.*, vol. 7, pp. 557–559) and one in Bolton (Hancock, E.G., 1978, *Zool. J. Linn. Soc. Lond.* vol. 63, pp. 295–303). The latter collection includes one slide bearing on its upper label the name 'Betulina', together with the data 'Birch Southgate July 13 – 47'. The contained specimens are two winged viviparous females, one fragmentary. The better specimen agrees in a number of important respects with Walker's 1852 description of *Aphis betulina*, and also agrees closely with available winged viviparae of *Aphis callunae* Theobald.

7. If it is accepted that the slide now in the collection of the Bolton Museum, and labelled 'Betulina', is the genuine material on which *Aphis betulina* was based, and if the Law of Priority is applied, the rather widely known *Aphis callunae* Theobald will be relegated to synonymy and replaced by the hitherto unknown and unused *Aphis betulina* Walker, 1852.

8. In spite of one apparent morphological point of difference between the description by Walker and the specimens in the slide, and of uncertainty as to whose hand wrote the name 'Betulina' on the slide label (Stroyan, 1978, in appendix to Hancock, *loc. cit.*), the overall balance of agreement between the description, the slide data and the contained aphids is held to justify the acceptance of the Bolton slide as being original material of *Aphis betulina* Walker.

9. Under these circumstances I consider it desirable to invoke Articles 23(a-b) and 79(b) of the International Code of Zoological Nomenclature, providing for the suppression under the plenary powers of unused senior synonyms published more than 50 years before the date of such rejection. In support of my application I cite the facts and bibliographic references already given in paragraph 5 above, which show that

(1) *Aphis betulina* Walker, 1852, has never since its first publication been employed as the valid name of a taxon; and that

(2) *Aphis callunae* Theobald, 1915, has been continuously and repeatedly so employed as the valid name of a well-known European aphid species; but is a junior subjective synonym of *Aphis betulina* Walker, 1852, as interpreted from a recently discovered Walker slide of the latter.

10. To formalize the synonymy of the two specific names I have designated and published as lectotype of *Aphis betulina* Walker the more complete of the two specimens on the slide now held by the Bolton Museum (Stroyan, 1978, in appendix to Hancock, *loc. cit.*).

11. I ask the International Commission on Zoological Nomenclature

(1) to use its plenary powers to rule that the specific name *callunae* Theobald, 1915, as published in the binomen *Aphis callunae*, is to be given precedence over the specific name *betulina* Walker, 1852, as published in the binomen *Aphis betulina*, whenever the two names are held to be synonyms;

(2) to place the specific name *callunae* Theobald, 1959, as published in the binomen *Aphis callunae*, on the Official List of Specific Names in Zoology with an endorsement that it is to be given precedence over the specific name *betulina* Walker, 1852, as published in the binomen *Aphis betulina*, whenever the two names are held to be synonyms;

(3) to place the specific name *betulina* Walker, 1852, as published in the binomen *Aphis betulina*, on the Official List of Specific Names in Zoology with an endorsement that it is not to be given priority over the specific name *callunae* Theobald, 1915, as published in the binomen *Aphis callunae*, whenever the two names are held to be synonyms.

GALAGO CRASSICAUDATUS E. GEOFFROY, 1812 (PRIMATES: GALAGIDAE): PROPOSED USE OF THE PLENARY POWERS TO SUPPRESS THE HOLOTYPE AND TO DESIGNATE A NEOTYPE. Z.N.(S)2285

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ABSTRACT: In the course of a revisory study of the greater galagos (Olson, 1979), it became evident that a number of problems precluded the subspecific allocation of the type specimen of *Galago crassicaudatus* E. Geoffroy, 1812 which is now referred to the genus *Otolemur* Coquerel, 1859. The inadequacies of the holotype are deemed to constitute 'exceptional circumstances', which justify this application in order to resolve a complex zoological problem and to establish nomenclatural stability within the species group concerned. The object of this application is to ask the International Commission on Zoological Nomenclature to use its plenary powers to suppress the holotype of *Galago crassicaudatus* E. Geoffroy, 1812 in the Muséum National d'Histoire Naturelle in Paris, specimen number 1808-174 (Type collection number 146), and to designate as the neotype of this taxon specimen number 4.12.3.6, in the British Museum (Natural History), London.

HISTORY OF THE CASE

The first report on the future type specimen of *Galago crassicaudatus* occurs in the almost totally overlooked article by E. Geoffroy, 1811: 164–165, in which he misidentified it as an example of Bosman's potto (Bosman, 1704: 32). This account contains an observation which is relevant to one of the three essential characteristics given by E. Geoffroy, 1812: 166, in the original description of his type and only specimen as *Galago crassicaudatus*, namely that its pelage coloration is uniformly grey-red (gris-roux) on the exterior. This description reads: 'Pelage gris-roux: Oreilles deux tiers de la longeur de la tête: queue touffue.' The account presented by E. Geoffroy, 1820:12, of the holotype repeated this 1812 description without alteration or addition. In 1828: 34, he amended this description to read that the ears were a quarter shorter than the head. These four publications by E. Geoffroy (1811, 1812, 1820 and 1828) contain the only descriptions of *G. crassicaudatus* and its holotype by the original author.

2. Lesson, 1840: 245–246, cited Geoffroy, 1811: 165 as describing the specimen as being coloured a uniform red (rousse) externally. Not only is this a misquotation, but it is also inconsistent with Lesson's own description of the specimen. In the same article,

Lesson (1840:245) reported its colour as 'pelage gris-roux en-dessus, gris-blanc en-dessous'. This description agrees with those of E. Geoffroy and other previous authors that the colour of the specimen is greyish-red. This makes it difficult to understand why Lesson reported E. Geoffrey, 1811, in describing its colour as uniformly red.

3. Another description of the holotype's colour is given by Temminck, in van der Hoeven, 1844:42. Temminck stated that the base of each hair on the body was of a blackish brown colour and the tip was grey or fawn. These last two colours were described as being widely distributed over all superior parts of the body except where it was shaded with blackish brown.

4. Dahlbom, 1856: 227, 229, gave a brief but important account of the holotype in which he described it as being greyish-yellow (*griseotestaceum*) in colour. He also noted that the ears were transparent in appearance.

5. Elliot, 1913, also personally examined the holotype as part of his review of the primates and he gave the following account of the specimen (1913:56):

'Geoffroy's type is in the Paris Museum, but is so faded that but little of the original colour remains. The tail has lost most of the hair on the apical half, and the example is in such a condition that a description of it would only serve to mislead.'

6. These observations by Elliot were confirmed in 1977 when the present author examined the holotype in Paris. The holotype consists of a mounted skin in an extremely poor state of preservation and most of an incomplete skull. The mounted specimen is very faded and its tail is missing an indeterminable amount from its distal end due to post-mortem breakage. The tips of both ears are also damaged.

7. The poor preservation of the pelage of the holotype, reported as long ago as 1913 by Elliot, is also evident in many of the more ancient type specimens in the Paris collection. The unsatisfactory state of these specimens can be attributed to their having been exhibited for a prolonged period of time in a gallery where they were exposed directly to sunlight. It has not been possible to determine when this deterioration was first noticeable in the holotype of *Galago crassicaudatus*. In the last two descriptions of the holotype prior to Elliot, 1913, Temminck, in van der Hoeven, 1844:42, and Dahlbom, 1856:227, made no reference to a fading of the specimen's coloration. However, from their distinctly differ-

ent descriptions and the particular colour reported by Dahlbom, it is reasonable to assume that the specimen was already considerably faded and its tail damaged by the early 1850's. The conclusion is supported by Dahlbom's reference to the ears as being transparent. The ears of the holotype are in fact devoid of pigment and they do appear transparent. This condition is unknown in living adult individuals of *Otolemur* and its presence in the type is consistent with the interpretation that the original colour of the holotype has been extremely bleached by sunlight.

PROVENANCE OF *'GALAGO CRASSICAUDATUS'* SENSU STRICTO

8. In his first account, E. Geoffroy, 1811:165, explained that he obtained his supposed 'potto' specimen from the collections of the Lisbon Museum but he cited no location of origin for the specimen. In the original and subsequent descriptions of this same specimen as *Galago crassicaudatus* (1812:166), (1820:36, 1828:34), he left the habitat of this animal blank.

9. The first authoritative identification of another specimen to this taxon, accompanied by a statement of locality, was made by Sundevall in a letter to van der Hoeven, in van der Hoeven, 1844:42 on 20 February 1844. In his letter, Sundevall reported that he had received a specimen of this animal from near Port Natal in Caffraria.

10. Van der Hoeven, 1844: 42, also quoted a communication from Temminck stating that the native land of this animal was unknown but that it was probably an inhabitant of Africa.

11. Peters, 1852: 292, claimed that the specimen described by E. Geoffroy in 1812 was very similar to those he collected near Quélimane and Tette and that it almost certainly also originated from Mozambique.

12. The most widely accepted interpretation of this issue was first proposed by Thomas, 1917: 48, in his geographical review of the races of *'Galago crassicaudatus'*. He said: 'The type locality of *crassicaudatus* itself, not known at the time of description, has first to be settled, and on this I should accept the first authoritative identification of specimens and statement of locality, which were made by Peters in 1852. He says that Geoffroy's type-specimen "stammt ohne Zweifel ebenfalls aus Mossambique her", and identifies with it his own specimens of various places, of which Quélimane is the first to be mentioned. I should therefore take that as the type locality.'

In preferring Peters, 1852, Thomas overlooked Sundevall's reference, in van der Hoeven, 1844, to Port Natal in Caffraria as the location near which his specimen of this taxon was collected. Sundevall's contribution (contra Thomas, 1917) is the first association of a locality with a specimen of this taxon other than the holotype. While Sundevall's account is less extensive than Peters's, it cannot be considered as less authoritative. In fact, prior to his letter to van der Hoeven, Sundevall had actually examined Geoffroy's type in Paris as part of a revisory work which included this group whereas there is no evidence that Peters examined the holotype prior to his association of it with his specimens from Mozambique. Thus there seems to be little justification for Thomas's 1917 selection of Peters, 1852, as the first authority on this subject.

DISCUSSION

13. The analysis of the available quantitative data from the cranium of the holotype clearly establishes its identity within the greater galago dichotomy initially described by Matschie, 1905: 13, and reiterated by most twentieth century reviewers of this group: Lönnberg, 1913: 43; Thomas, 1917: 47; Schwarz, 1931: 44; Hill, 1953: 217. The morphometric analysis of the cranium plus the descriptive indication of the original size of the holotype's ears by E. Geoffroy, 1812 and 1828, demonstrate that it is not a representative of the small East African coastal species of *Otolemur (= O. garnettii)* as claimed by J. Buettner-Janusch and V. Buettner-Janusch, 1963: 1012, without corroborative evidence. The results of this analysis agree rather with those of Matschie, 1905, Lönnberg, 1913, Thomas, 1917, Schwarz, 1931 and Hill, 1953, in identifying the holotype as a form of the larger southern African species which therefore takes the specific name *crassicaudatus.* While it is possible to establish the specific biological identity of the holotype, its subspecific identity is indeterminable because of the lack of diagnostic data about its pelage coloration and of geographical information about its provenance.

14. The subspecific classification adopted in the author's present revisory study of *Otolemur crassicaudatus* is based upon the different pelage colorations within this species. The subspecific identity of *crassicaudatus* remains uncertain because of the deteriorated condition of the holotype and the ambiguity in the descriptions of its dorsal pelage coloration by E. Geoffroy, 1811, Lesson, 1840, Temminck, in van der Hoeven, 1844, Dahlbom, 1856, which makes it impossible to determine its original condition.

Accepting E. Geoffroy's 1811 description of this specimen as uniformly greyish-red does not resolve this ambiguity, because, of the two southern African subspecies of the *crassicaudatus* group, one is basically grey in colour with a brownish wash to the dorsum in many individuals, while the other is basically reddish-brown with some grey in many individuals. E. Geoffroy's descriptions of the holotype have been taken by most recent authorities: Sclater, 1900: 19; Matschie, 1905: 241; Lönnberg, 1913: 44; Thomas, 1917: 49; Fitzsimons, 1919: 79; Haagner, 1920: 17; Schwarz, 1931: 48; Shortridge, 1934: 14; Rode, 1937: 25; G. Allen, 1939: 115; Roberts, 1951: 17; Ellerman et al, 1953: 92; Hill, 1953: 222; Lawrence & Loveridge, 1953: 28; Astley-Maberly, 1959: 179; Sweeney, 1959: 15; Meester et al, 1964: 1; Meester & Setzer, 1971: 3; Boer, 1973: 158; Smithers & Tello, 1976: 76 to associate the holotype with the latter subspecific group. However, it is impossible to substantiate this determination due to the present condition of the holotype. Moreover, it is not universally accepted that this is the correct subspecific association for the holotype: a minority of authorities: Beddard, 1901: 271; Frade, 1924: 120; Swynnerton & Hayman, 1951: 297; Kingdon, 1971: 291 have associated the type specimen with the former subspecific group without presenting evidence in support of their decision.

15. The uncertainty of the type specimen's morphological affinity to one or other of these two subspecific groups is compounded by the absence of provenance data for the specimen. The widely accepted designation of Quélimane as the substitute type locality by Thomas in 1917 was based upon the erroneous opinion that Peters, 1852, was the first reviewer of this subject. Furthermore, it undermines the availability of the name *'Galago crassicaudatus'*. Quélimane is located within a recognisable zone of hybridization between the two southern African subspecies of *Otolemur crassicaudatus* which extends from eastern Zimbabwe-Rhodesia through the Zambezi River region of Mozambique to southern Malawi. While E. Geoffroy's description could in fact be interpreted as describing an intermediate condition between the two distinct subspecific morphologies to the north and to the south of this zone, this conclusion is both impossible to confirm and unnecessarily disruptive to the nomenclature of this species group, since the name given to such a hybrid cannot be used for either of the parental species under Article 24 c of the Code.

16. The uncertainty about the original coloration of the dorsal pelage of the type-specimen of *crassicaudatus* is of considerable systematic importance because this characteristic is the most diagnostic subspecific feature within the species of which this

specimen is the nominal type. The other features reported for this specimen by E. Geoffroy, 1811, 1812, 1820 & 1828, and other authorities or those features which are presently observable on the holotype are inadequate to establish its subspecific identity within its species. This absence of diagnostic subspecific characteristics in the holotype of *crassicaudatus* is due to the deteriorated condition of the specimen, the ambiguities involved in its previous descriptions and its lack of precise locality data.

17. The unfortunate circumstances surrounding the holotype of *crassicaudatus* reached a tragic climax in 1978 with the fire which totally destroyed the collections, library and records of the Museu Nacional de Historia Natural in Lisbon. This catastrophe eliminated the only remaining source of information which could have resolved some of the problems surrounding the specimen which was originally part of this collection.

18. All of these factors are deemed to constitute 'exceptional circumstances' which justify the designation of a neotype whose morphology is consistent with the most widely held interpretation about the subspecific identity of *crassicaudatus* and whose provenance is also in accord with the locality given by Sundevall, in van der Hoeven, 1844: 42, in the first authoritative identification of a specimen of known origin as a representative of this taxon. This request is considered necessary in order to resolve a complex zoological problem and to establish stability within the species-group typified by *crassicaudatus.*

19. Therefore, the International Commission on Zoological Nomenclature is requested:

(1) to use its plenary powers to suppress all previous designations of type specimens for the nominal species *Galago crassicaudatus* E. Geoffroy, 1812, and to designate a neotype as follows: *Galago crassicaudatus* E. Geoffroy, 1812 (*Ann. Mus. Hist. nat. Paris* vol. 19:166); adult male skin and skull, British Museum (Natural History), London, number 4.12.3.6.

(2) to place the specific name *crassicaudatus* Geoffroy, 1812, as published in the binomen *Galago crassicaudatus,* and as defined by the neotype designated under the plenary powers in (1) above, on the Official List of Specific Names in Zoology.

PROPOSED NEOTYPE

Galago crassicaudatus E. Geoffroy, 1812

Neotype: British Museum (Natural History), London, specimen number: 4.12.3.6.

The specimen consists of a stuffed male museum skin in excellent condition with a separate skull and mandible. The skull of the specimen indicates that the individual was a mature adult, and it is complete except for the crown of the left upper canine and the left mandibular corpus distal to the dental scraper. These two parts of the skull appear to have been destroyed at the time of collection. This specimen has been identified in previous publications under the following names:

Galago crassicaudatus; Thomas & Schwann, 1905: 256, Elliot, 1913: 54

Galago crassicaudatus garnettii; Schwarz, 1931: 50

Otolemur crassicaudatus garnettii; Roberts, 1951: 18

Collector: The specimen was collected by C.H.B. Grant on 24th September in 1904 and bears his collector's number 881. It was presented to the B.M.(N.H.) in 1904 by C.D. Rudd.

Locality: The specimen was collected 15 km east of Eshowe in the Ngoye Forest, Natal Province, R.S.A. (28° 52' S, 31° 37' E.). This is less than 100 km north of Durban (formerly Port Natal) and it is considered to be consistent with the provenance of the first specimen from a known locality to be authoritatively identified as *Galago crassicaudatus* by Sundevall (in van der Hoeven, 1844: 42). Grant noted on the specimen's label that it was collected in thick forest at an altitude of 700 feet.

Description of specimen:

The overall colour given to the dorsal surface of the specimen by the cover hairs is a light brown with the midline of the body being slightly more reddish and considerably darker due to the presence of a concentration of long black guard hairs. The cover hairs on the top of the head are dark brown while those of the face and cheeks are a lighter brown. There are no orbital rings or interorbital strip on the face, but the hair on the muzzle is shorter than on the rest of the face. The sides of the body and the lateral surfaces of the limbs including the superior surfaces of the feet and hands are a uniform light brown to buff colour. The tail is a pale reddish-

buff colour with a dark chocolate brown tip on its distal 7 cm. The ventral surface of the body is yellowish-white in marked contrast to the darker coloured dorsal surface. The light colour of the venter also extends on to the medial surface of the limbs and over the throat region to the mouth. The hairs around the genitals are a rich yellow colour and there is an area of naked glandular skin 5.0 cm long and 2.1 cm wide covering the throat. All surfaces of the body and limbs are covered with a dense short coat of dark silvery grey woolly hairs which frequently show through the cover hairs to create a dark grey or blackish patch on the pelage. These are particularly evident on the venter where the cover hairs are much shorter. This dark woolly coat is not found on either the head or the tail. The naked area of the ears, rhinarium and plantar surfaces of the feet and hands are a dark blackish brown colour. The measurements recorded for the specimen by Grant at the time of collection are: Head + Body length 313 mm, Tail length 403 mm, Hindfoot length 88 mm, and Ear height 62 mm.

The skull of the specimen is dentally mature but neither of the basicranial sutures is fused. There is a small sagittal crest. The dentition of the upper and lower postcanine series exhibits only slight apical wear on the cusps of the teeth. The M_1 and M_2 are anomalous in lacking protocristids. Maximum cranial length: 7.25 cm, Bizygomatic breadth 4.86 cm, Palatal length: 2.79 cm, Palatal breadth across M^2s: 2.38; length of upper postcanine series: 2.30.

The possibility of selecting the holotype of '*Galago zuluensis*' Elliot, 1907 as the neotype of '*Galago crassicaudatus*' was considered but this option was rejected for the following reasons. The condition of the holotype is not particularly good. Its stuffed skin was distorted during preservation, thus obscuring many important characteristics, and its skull has lost many of its teeth. In addition to its poor condition, the history of the holotype is not fully known. The holotype was originally part of the collections of the former Kristiania Museum in Oslo and it was obtained by the B.M.(N.H.) in 1894 as part of a specimen exchange before becoming a type. The only information available for the specimen is that it was collected by Dahl in Zululand, now Natal Province South Africa. Given the poor condition of the holotype and its limited associated data, there would have been little benefit in selecting it as the proposed neotype of *crassicaudatus*. The specimen which is proposed as the neotype of this taxon is exemplary and it is accompanied by considerably more information about its origin. In the present author's revisory study of *Otolemur, 'Galago zuluensis'* is recognized as a subjective synonym of *Otolemur crassicaudatus crassicaudatus*.

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HELIOTHIS OCHSENHEIMER, 1816 (INSECTA, LEPIDOPTERA): PROPOSAL TO DESIGNATE GENDER AND STEM. Z.N.(S.) 2306

By I.W.B. Nye *(British Museum (Natural History), London SW7 5BD, U.K.)*

The object of this application is to ask the Commission to rule on the gender and the stem of the generic name *Heliothis* Ochsenheimer, 1816, a name widely used throughout the world for agricultural pests of major economic importance, and as the type genus of a well known subfamily of the NOCTUIDAE.

2. *Heliothis* was used first by Hübner, [1806] (*Tentamen determinationis digestionis* . . . .:[2]), in a work that has been rejected for nomenclatural purposes in 1926, Opinion 97, and in 1954, Opinion 278. The only species included by Hübner was *Phalaena dipsacea* Linnaeus, 1767, and *Heliothis* was treated as feminine.

3. *Heliothis* was next used by Hübner, 1808 (*Erste Zuträge Samml. exot. Schmett.:* 5), in a work that has also been rejected for nomenclatural purposes in 1966, Opinion 789. The only name then included by Hübner was of a new species *Heliothis jucunda,* at that time a *nomen nudum* which nevertheless shows that *Heliothis* was again treated as feminine.

4. *Heliothis* was next used, and on this occasion established, by Ochsenheimer, 1816 (*Schmett. Eur.*, vol. 4: 91), and again treated as feminine. The type species *Phalaena dipsacea* Linnaeus, 1767 (*Syst. Nat.,* (Edn 12) vol. 1: 856), was subsequently designated by Samouelle, 1819 (*Entomologist's useful Compendium:* 252). Treitschke, 1826 (in Ochsenheimer, *Schmett. Eur.*, vol. 5 (3): 215), gave the Greek derivation of *Heliothis* and continued to treat it as feminine.

5. Meigen, 1832 (*Syst. Beschreibung eur. Schmett.*, vol. 3: 224), emended the generic name to *Heliothisa,* thus emphasizing the feminine gender.

6. Up to the present time about 35 new taxa with available names have been established in the genus *Heliothis* and of these 20 of the adjectival species-group names published by 14 different authors were treated as feminine, 5 adjectival names by 3 different authors were treated as masculine, and the remainder as nouns.

7. Ever since the classic checklist by Staudinger, 1901 (in Staudinger & Rebel, *Cat. Lepid. palaearct. Faunengeb.* pt.1), the generic name *Heliothis* has been treated as feminine throughout the Old World, and similarly since McDunnough, 1938 (*Check List*

Lepid. Canada and U.S.A.), this name has been treated as feminine by New World authors.

8. Hardwick, 1965 (The Corn Earworm complex, *Mem. ent. Soc. Can.*, No. 40), established *Helicoverpa* for the type species *Noctua armigera* Hübner, [1808], one of the most important pests of cotton, maize (corn), tobacco, tomatoes and other crops in the Old World. Sixteen other species were also placed in *Helicoverpa* including *Phalaena zea* Boddie, 1850, one of the most destructive insect pests in the U.S.A., attacking the same crops as *armigera; Heliothis punctigera* Wallengren, 1860, a major pest in Australia; and other pest species such as *Heliothis assulta* Guenée, 1852, and *Noctua virescens* Fabricius, 1777.

9. Boursin, 1965 (*Bull. mens. Soc. linn. Lyon*, vol. 34: 186), synonymized *Helicoverpa* with *Chloridea* Duncan [& Westwood], 1841, nowadays treated as a junior subjective synonym of *Heliothis.*

10. Hardwick, 1970 (A generic revision of the North American Heliothidinae, *Mem. ent. Soc. Can.* No. 73: 18), reiterated his opinion that *Helicoverpa* and *Heliothis* were generically distinct and continued to treat both as feminine.

11. Steyskal, 1971 (On the grammar of the name *Heliothis* Ochsenheimer, *J. Lepid. Soc.*, vol. 25: 265), pointed out that under the Code, Article 30(a)i, the gender of *Heliothis* was masculine and would require a ruling by the Commission to fix it as feminine. In an Editor's Note at the end of Mr. Steyskal's paper it was suggested that the case should be submitted to the Commission for a ruling. I have not done this up to now as I did not anticipate that anyone would wish to upset the traditional feminine treatment of this generic name.

12. Todd, 1978 (A Checklist of Species of *Heliothis* Ochsenheimer, *Proc. ent. Soc. Wash.*, vol. 80: 2) stated that he was treating *Helicoverpa* as a synonym of *Heliothis* and that 'The generic name, *Heliothis,* is masculine in gender, but has usually been treated as feminine.' He then gave a checklist of valid names and synonyms in which the terminations of 33 valid names were changed to masculine. Dr Todd is fortunate in that he could treat *zea* Boddie, commonly known as the New World Corn Earworm or Cotton Bollworm, as a noun and so did not have to change the name of this major pest in North America. Of the other species in the U.S.A. placed in *Heliothis,* if this name is treated as masculine then the termination of three should be changed, but if treated as feminine then all could remain the same. The other 30 taxa the terminations of whose names Dr Todd has changed occur outside the U.S.A. and unfortunately include all the major pests in this group such as *armigera* Hübner, *punctigera* Wallengren, *assulta* Guenée,

and other well known species such as *viriplaca* Hufnagel, *maritima* Graslin, *peltigera* [Denis & Schiffermüller], and *nubigera* Herrich-Schäffer. No taxonomist in the Old World would with impunity dare to suggest any such unnecessary change in spelling of these names which have had total stability and universality of use for so long.

13. In the *Review of Applied Entomology* (Agricultural Series) vol. 64 containing abstracts of works published during 1976, *H. armigera* was used in 74 different works, during 1977 it was used in 58 works, and during 1978 in 64 works. There are nomenclatural problems enough for field workers to contend with as the specific names oscillate between *Heliothis* and *Helicoverpa,* but now for some nomenclaturists to say that these generic names have different genders and therefore that the terminations of hitherto stable specific names must be changed, is evidence that in some respects zoological nomenclature is out of touch with the real world of practical agriculture and computer-based information retrieval.

14. Under the Code, Article 30(a)i, the Commission can rule on the gender of a genus-group name without the use of the plenary powers. I therefore ask for *Heliothis* to be designated as feminine in conformity with tradition and usage.

15. Boisduval, 1828 (*Europaeorum Lepidopterorum Index Methodicus:* 94), first used the name HELIOTHIDI for a tribe containing *Heliothis.* Since then and up to the present day it has been used as a family-group name based either on HELIOTH- or HELIOTHID-.

16. Steyskal, 1971: 264, pointed out that the name *Heliothis* is an aorist passive participle of the Greek verb hēlioō and strict application of the Code, Article 29a, would require the use of the stem HELIOTHENT- in forming family-group names. This has never been followed.

17. Steyskal continued 'However, if Article 11.b of the Rules, which states that zoological names "must be either Latin or Latinized," be interpreted strictly, we may consider that the complex Greek participial system was not a part of Latin, except in the case of a few words used as nouns and to be found in Latin dictionaries. We may then consider *Heliothis* as declinable in the way the great majority of Latin nouns in *-is* are declined, . . .

'If this is done, the stem used in forming family-group names will be *Helioth-* and the subfamily name consequently Heliothinae. At any rate, there can be no basis for the insertion of *-id-*.'

18. The *Code,* Article 29d, states that 'A family-group name proposed before 1961 based upon an incorrectly formed stem is not to be amended for that reason if it is in general use'. The stem

HELIOTH- is certainly in general, though not in universal, use. In any case it is customary in the Lepidoptera to avoid the clumsy -ididae termination, for example *Pyralis,* family PYRALIDAE (Opinion 450); *Episema,* family EPISEMIDAE (Opinion 494); and *Pieris,* family PIERIDAE (Opinion 500). An application to the Commission by Steyskal, 1972 (*Bull. zool. Nom.,* vol. 29: 27), to have the names PYRALIDAE and EPISEMIDAE changed to PYRALIDIDAE and EPISEMATIDAE was refused in Opinion 1094.

19. The International Commission on Zoological Nomenclature is therefore requested:

(1) to rule that the stem of the generic name *Heliothis* Ochsenheimer, 1816, is HELIOTH-;

(2) to rule that the gender of the generic name *Heliothis* Ochsenheimer, 1816, is feminine;

(3) to place on the Official List of Family-group Names in Zoology:

(a) HELIOTHINAE (ex Heliothidi) Boisduval, 1828, type genus *Heliothis* Ochsenheimer, 1816;

(4) to place on the Official List of Generic Names in Zoology:

(a) *Heliothis* Ochsenheimer, 1816 (gender: feminine), type species by subsequent designation by Samouelle, 1819, *Phalaena dipsacea* Linnaeus, 1767;

(5) to place on the Official List of Specific Names in Zoology:

(a) *dipsacea* Linnaeus, 1767, as published in the binomen *Phalaena dipsacea* (specific name of the type species of *Heliothis* Ochsenheimer, 1816).

20. This application is strongly supported by those of my colleagues who are involved with the usage of *Heliothis* including J.D. Bradley, D.S. Fletcher, K.M. Harris and J.D. Holloway.

NOTE ON THE ABOVE APPLICATION Z.N.(S.) 2306

By the Secretary, International Commission on Zoological Nomenclature

I should like to suggest a more plausible etymology for the generic name *Heliothis* Ochsenheimer, 1816 than that put forward by Mr Steyskal. The Greek verb "helioomai" seems to be known only in the passive voice and to mean "to be exposed to the sun". On the other hand, we are dealing with the name of a Noctuid moth, which would be most unlikely to be exposed to the sun. The Ionian Greeks used the noun "Heliotis" as a feminine form of "helios" (the sun) for the moon, and it seems to me more likely that either Ochsenheimer, his copyist, or his printer made a small error in latinising a highly appropriate Greek word (not involving any change of pronunciation in German) than that any of them discovered and deliberately used an obscure and highly inappropriate word. *Heliotis* as a generic name (also in Lepidoptera) was used by Lefebvre, 1827, and is not a junior homonym of *Heliothis* Ochsenheimer, 1816.

In the *Index Animalium,* Sherborn lists not fewer than 10 specific epithets in the feminine proposed before 1850 for species of *Heliothis.*

This suggestion entails no obvious change in the proposals put forward by Dr Nye, but it does question the correctness of the view that the gender of the generic name *Heliothis* is masculine under the Code.

The irrelevant fact may be added that at Carrae in ancient Italy the sun was worshipped as Lunus, the masculine of Luna.

ATHYREUS MACLEAY, 1819, AND *GLYPTUS* BRULLE, 1835 (INSECTA: COLEOPTERA): PROPOSED CONSERVATION. Z.N.(S.)1583

By H.F. Howden (*Carleton University, Ottawa, Canada K1S 5B6*)

The main purpose of the present application is to protect the well-known geotrupine generic name *Athyreus* Macleay, 1819, from the threat posed by its unused senior synonym *Glyptus* Hoffmannsegg, 1818. At the same time, but as a corollary, it is necessary to consider the generic name *Glyptus* Brullé, 1835. The facts are as follows:

2. *Glyptus* Hoffmannsegg, 1818, *Wiedemann's Zool. Mag.* vol. 1 (2), p. 85, was described without any included species. The description and locality (Bahía, Brazil), however, leave no room for doubt: the genus is that now known as *Athyreus,* which (as currently defined) contains some 31 species. As far as I know, no species has ever been placed in *Glyptus* Hoffmannsegg. The name has been cited only in the synonymy of *Athyreus* (Gemminger & Harold, 1869, *Catal. Coleopt.*, vol. 4, p. 1076; Boucomont, 1902, *Gen. Ins.*, fasc. 7, p. 7) and never used as a valid name.

3. *Athyreus* Macleay, 1819, *Horae entomol.*, vol. 1(1), p. 123, was established for three species, none of which was then fixed as type species. The first species, *A. bifurcatus* Macleay, 1819, *op. cit.*, p. 124, was designated as type species by Howden & Martínez, 1963, *Canadian Entomol.*, vol. 95, p. 350. The genus, which was there made type genus of the tribe ATHYREINI, had previously been used for a number of species. Between the years 1819, when M'Leay proposed the name *Athyreus,* and 1963 when Howden and Martínez divided *Athyreus* into four genera and proposed the tribe ATHYREINI, at least 70 species names had been included under *Athyreus* by 14 or more authors (see Junk, *Coleopt. Cat.*, pars 46 by Boucomont, 1912, and *Cat. Coleop. of Central and S. America* by Blackwelder, 1944). The restriction of the genus (by Howden and Martínez, 1978, *Contrib. amer. entomol. Inst.*, vol. 15(4), 70 pp.) currently recognizes 31 species, with the remaining species being placed in other genera.

In 1963 when *Athyreus* was divided, the use of *Glyptus* Hoffmannsegg was rejected by Howden and Martínez as a *nomen oblitum* on the basis of Article 23b. However, while this article would allow the continued use of *Athyreus* MacLeay, it leaves the use of *Glyptus* Brullé in question.

4. *Glyptus* Brullé, 1835, *Hist. nat. Inst.*, vol. 5, Coleoptera

II, p. 83, was established for a single carabid species, *G. sculptilis* Brullé, 1835, *op. cit.*, p. 84, which is thus the type species by monotypy. The genus now contains only two African species (Basilewsky, 1935, *Expl. Parc nat. l'Upemba*, Carabidae, pp. 180-181), but the fact that it is a junior homonym of *Glyptus* Hoffmannsegg has never been noticed and the name has been undisturbed in usage for over 140 years. There seems no reason why the senior homonym, whose suppression as a senior synonym of *Athyreus* is the main object of this application, should retain its rights under the Law of Homonymy and I therefore ask for its suppression for that purpose also. The junior homonym, *Glyptus* Brullé, 1835, is moreover the type genus of the tribe GLYPTINI Basilewsky, 1953.

5. Sherborn, 1932, *Index Anim.*, Index to Generic Names, p. 518, lists *mobilicornis* and *sculptilis* under *Glyptus* Hoffmannsegg. *Scarabaeus mobilicornis* Fabricius was mentioned by Hoffmannsegg in his discussion of *Glyptus*, but was not referred to the genus. *G. sculptilis* Brullé was, as we have seen, described in the different, homonymous nominal genus *Glyptus* Brullé, in a different family.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the generic name *Glyptus* Hoffmannsegg, 1818, for the purposes of both the Law of Priority and the Law of Homonymy;

(2) to place on the Official List of Generic Names in Zoology:
   (a) *Athyreus* Macleay, 1819 (gender: masculine), type species, by subsequent designation by Howden & Martínez, 1963, *Athyreus bifurcatus* Macleay, 1819;
   (b) *Glyptus* Brullé, 1835 (gender: masculine), type species, by monotypy, *Glyptus sculptilis* Brullé, 1835, as conserved by the use of the plenary powers in (1) above;

(3) to place on the Official List of Specific Names in Zoology:
   (a) *bifurcatus* Macleay, 1819, as published in the binomen *Athyreus bifurcatus* (specific name of type species of *Athyreus* Macleay, 1819);
   (b) *sculptilis* Brullé, 1835, as published in the binomen *Glyptus sculptilis* (specific name of type species of *Glyptus* Brullé, 1835).

(4) to place the generic name *Glyptus* Hoffmannsegg, 1818, as suppressed under the plenary powers in (1) above, on the Official Index of Rejected and Invalid Generic Names in Zoology.

Readers of the Bulletin are reminded that the main regular source of income to finance the work of the Commission comes from sales of this periodical, and that this is insufficient to meet the needs of zoologists for the services provided by the Commission and to maintain the office at an efficient level. Help in the form of donations and bequests will, therefore, be received with gratitude.

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 37, part 4 (pp. 193–266), T.P., I–VI 4 December, 1980

NOTICES

(a) *Date of commencement of voting.* In normal circumstances the Commission may start to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after the publication of each application. Any zoologist who wishes to comment on any of the applications in the present part is invited to send his contribution, in duplicate, to the Secretariat of the Commission as quickly as possible, and in any case in time to reach the Secretariat before the close of the six-month period.

(b) *Possible use of the plenary powers.* The possible use by the Commission of its plenary powers is involved in the following applications published in the present part of the *Bulletin* (that marked with an asterisk involves the application of Articles 23a-b and 79b):

*(1) *Artemia* Leach, 1819 (Crustacea, Branchiopoda), proposed conservation. Z.N.(S.)1984. J.H. Lochhead.

(2) *Melithaea* Milne Edwards & Haime, 1857 and *Isis ochracea* Linnaeus, 1758 (Coelenterata, Anthozoa), proposed conservation. Z.N.(S.) 2150. K.M. Muzik & F.M. Bayer.

(3) *Geoemyda* Gray, 1834, and *Rhinoclemmys* Fitzinger, 1835 (Reptilia, Testudines), proposed conservation. Z.N.(S.)2287. H.M. Smith, C.H. Ernst & R.B. Smith.

(4) *Testudo scripta* Schoepff, 1792: *Emys cataspila* Günther, 1885. (Reptilia, Testudines), proposed conservation. Z.N.(S.) 2315. J.M. Legler, H.M. & R.B. Smith.

(5) *Chromis* Cuvier *in* Desmarest, 1814 (Osteichthyes, Perciformes, POMACENTRIDAE), proposal to place on Official List of Generic Names in Zoology, and that generic names ending in *-chromis* be ruled to be masculine. Z.N.(S.) 2329. R.M. Bailey, C. Richard Robins & P. Humphry Greenwood.

(c) *Receipt of new applications.* The following new applications have been received since the publication of vol. 37(3) on 25 September 1980. That marked with an asterisk involves the application of Articles 23a-b and 79b.

*(1) *Oeciacus vicarius* Horváth, 1912 (Insecta, Hemiptera, CIMICIDAE), proposed conservation under plenary powers. Z.N.(S.) 2358. R.C. Froeschner, E.V. Coan and R.E. Rychman.

(2) *Typus* Sellards, 1909 (Insecta, Protodonata), proposed conservation. Z.N.(S.) 2359. F.M. Carpenter & P.E.S. Whalley.
(3) *Coeloides scolytica* [sic] Wesmaël, 1838 (Insecta, Hymenoptera), proposed designation as type species of *Coeloides* Wesmaël, 1838. Z.N.(S.) 2360. C. van Achterberg.
(4) *Strongylopus* Tschudi, 1838 (Amphibia, Anura), proposed designation of a type species under the plenary powers (see also Opinion 713). Z.N.(S.) 2361. A. Dubois.
(5) PHRYNOBATRACHINAE Laurent, 1940 (Amphibia, Anura), proposed conservation. Z.N.(S.) 2362. A. Dubois.

SPECIAL ANNOUNCEMENTS

ELECTION OF VICE-PRESIDENT OF THE COMMISSION

Professor Per Brinck was re-elected Vice-President as from September 1980 and under Bylaw 12b will serve for 6 years.

INTERNATIONAL TRUST FOR ZOOLOGICAL NOMENCLATURE

We are pleased to report that it has been decided the President of the Commission should be ex officio a member of the Trust. Dr. C.W. Sabrosky has accordingly been invited and has accepted membership.

In welcoming Dr. C.A. Wright as an observer of the Trust, on behalf of the Royal Society and the International Union of Biological Sciences, it was reported in the Bulletin (vol. 37, p. 132) that Dr. Wright was a Fellow of the Royal Society. This lapsus is much regretted.

Again, we are sorry that when we published the resignation of Mr C.W. Wright from the Trust (vol. 37, p. 131) it was stated that he had taken up a research fellowship at Churchill College, 'Oxford'. This should have been Wolfson College, Oxford.

INCREASE IN THE PRICE OF THE BULLETIN

The Trust regrets that, owing to increases in the printing costs, it will be necessary to increase the price of the Bulletin. Volume No. 38 (in four parts) will now cost £40. The corresponding rate in dollars will be $108. Reprints for authors will also cost more: the first 25 copies will still be given free but any additional copies will be increased to 12p per page.

FINANCIAL SUPPORT

The Trust has great pleasure in announcing that Professor D. Curry, F.G.S., on behalf of his family Trust, has most kindly donated £5,000 to help with the cost of producing the third edition of the Code. We are extremely grateful for this generosity.

R.V. MELVILLE,
Secretary
International Commission on Zoological Nomenclature
14 October 1980.

COMMENT ON PROPOSALS CONCERNING THE NAMES OF FOUR SPECIES OF CARABIDAE (INSECTA, COLEOPTERA) ESTABLISHED BY LINNAEUS Z.N.(S.)1237

(see vol. 34, pp. 243–246; vol. 36, pp. 197–198)

by Hans Silfverberg (*Zoological Museum, SF–00100 Helsinki, Finland*)

I wish to support Professor Lindroth's application for the stabilisation of *Pterostichus versicolor* (Sturm), *P. melanarius* (Illiger) and *Bembidion bruxellense* Wesmäel in their accustomed usages. I find that Professor Mroczkowski's counter-proposal would lead to great confusion if it were accepted by the Commission. When the problem with the Linnean types was originally discovered, that proposal would probably have been the best way out, but since then much has been done, and the revised nomenclature has won wide acceptance. I think the names used by Lindroth are now the better known ones. They have been used in large-area revisions and handbooks, covering e.g. North America (Lindroth, 1961–1969, *Opusc. Entomol.*, Suppl. 20, 24, 29, 33–35, pp. 1–1192); Central Europe (Freude, 1976, *Die Käfer Mitteleuropas* vol. 2, pp. 1–302) and the USSR (Kryzhanovskii, 1965, *Opred. Faune SSSR*, vol. 89, pp. 29–77). They have also been used in regional checklists and national faunas for e.g. Denmark (Hansen, 1968, *Denmarks Fauna*, vol. 76, pp. 1–451); Britain (Pope, 1977, *Handb. Ident. Brit. Ins.* vol. 11 (3), pp. 1–105) and Northern Europe (Silfverberg, 1979, *Enumer. Coleopt. Fennoscand. Dan.*, 79 pp.) and further in various faunistic and ecological studies in different countries, such as Andersen, 1970 (*Norsk. entomol. Tidsskr.*, vol. 17, pp. 17–65); Borg, 1973 (*Entomol. Tidskr.* vol. 94, pp. 56–58); Strand, 1970 *Norsk. entomol. Tidsskr.*, vol. 17, pp. 125–145); Zajanckauskas & Pileckis, 1968 (*The reservation of Zuvintas*, Vilnius, pp. 264–282) and others. Thus Mroczkowski's opinion that the names he prefers are in current use by all coleopterists is no longer correct, and I think that the Commission should accept Lindroth's application.

THE INTERNATIONAL CODE OF ZOOLOGICAL NOMENCLATURE: RESULT OF VOTE ON PROPOSALS FOR SUBSTANTIVE AMENDMENTS (SECOND INSTALMENT) Z.N.(G.) 182

By the Secretary, International Commission on Zoological Nomenclature

In *Bull. zool. Nom.* vol. 36 (2), pp. 66–70 a report was published on the first instalment of the Commission's vote on the Editorial Committee's proposals for substantive amendments to the International Code of Zoological Nomenclature. That instalment of the vote concerned some of the proposals that had been published in *Bull. zool. Nom.* vol. 34, pp. 167–175; others of those proposals were then reserved for further consideration by the Editorial Committee.

2. All the proposals that had reached the Committee were discussed by the Commission at its special meeting at Stensoffa, Sweden in August 1979, when the Ecological Field Station of the University of Lund was put at our disposal by the kind offices of Professor Per Brinck. A report from that meeting was presented through the general meeting of the Commission at Helsinki to the Section on Zoological Nomenclature of the Division of Zoology of IUBS. As already reported elsewhere (*Bull. zool. Nom.* vol. 36, p. 224) the Section authorised the Commission to vote on the outstanding proposals in due course and to incorporate the results of the vote into the Code.

3. Two further voting papers were accordingly sent out in February 1980. The first of these, V.P.(80)1, concerned the matters reserved for further consideration from the first instalment of the vote. The second, V.P.(80)2, concerned proposals that had been published in *Bull. zool. Nom.* vol. 35 (2), pp. 77–87, October 1978. The matters submitted for a vote in these voting papers are set out below. Each voting paper was accompanied by an appendix in which comments received by the Editorial Committee on the proposals were summarised. These appendices are also reproduced here.

V.P.(80)1

Vote No.	Article in Code	Commission Report to Section on Zoological Nomenclature, Helsinki, 1979, Section B.	V.P.(79)1 Number
1	Art. 8 Publication	6. That printing by ink on paper be no longer obligatory among the conditions that constitute publication. The provision that confines publication for the purposes of the Code to works printed only in ink on paper (Article 8(1)) would be removed because by modern technology other methods of printing are now common and, moreover, some of them may only be distinguished with difficulty from works produced by customary techniques. The question is part of the broader issue of what should constitute publication for the purposes of the Code and of the criteria of availability.	3
	Art. 9 Publication	7. That the following be listed as methods that do not, if employed, constitute publication:	3
2		(a) handwritten material at any time, and if reproduced as such by a mechanical process after 1930	
3		(b) photographs as such except microcard and microfiche	
4		(c) computer print-outs as such	
5		(d) photocopies as such (e.g. xerography and other indirect electrostatic reproductions) unless such a method is used to reproduce a work that satisfies Article 8	
6		(e) acoustic tapes and other acoustic recordings as such.	
		The provisions relating to publication present particular difficulty, mainly because the existing provisions do not reflect recent advances in printing technology that greatly facilitate the production of numerous identical copies of works that may meet the criteria of publication established in Article 8 of	

Vote No.	Article in Code	Commission report to Section on Zoological Nomenclature, Helsinki, 1979, Section B.	V.P.(79)1 Number
		the Code. In an attempt to exercise some control over the quality of works, these methods would be added to those currently listed in Article 9.	
7a 7b	Art. 30a Greek and non-classical epithets	13. That adjectival epithets that are, or end in, Greek or words that are not Latin be treated as indeclinable. The requirement in Article 30 of the Code that an adjectival epithet must agree in gender with the generic name with which it is combined causes difficulty with epithets that are not of Latin origin. Epithets that are or end in Greek words, or words that are not Latin, or that are arbitrary combinations of letters, would be treated as indeclinable.	8
8	Art. 32d(i) Diacritic marks especially umlauts	18. That in the case of scientific names spelled with an umlaut when originally proposed, if there is any doubt that the name is based on a German word, that it be so treated. It is also proposed that any names proposed with umlauts after the publication of the 3rd Edition be treated by deleting the umlaut irrespective of origin. The Code Article 32 c (i) provides that all diacritic marks on letters in scientific names originally published with such marks are to be deleted, with the exception of scientific names based on German words originally spelled with an umlaut, where *ä*, *ö* and *ü* are replaced by *ae*, *oe*, and *ue* respectively. Article 27 requires names to be spelled without diacritic marks. It is intended that the proposed amendment to Article 32 will encourage zoologists forming new names to transliterate according to some preferred system before publishing them.	11
9	Art. 33d Permissible variants of *-i* and *-ii*	20. That in an epithet formed from the genitive of a personal name the subsequent use of the termination *-i* in place of the termination *-ii* used in the original spelling (and vice versa) constitutes an incorrect subsequent spelling	12

Vote No.	Article in Code	Commission report to Section on Zoological Nomenclature, Helsinki, 1979, Section B.	V.P.(79)1 Number
		even if clearly deliberate. It is well known that there is divided opinion as to whether such names should be treated as permissible alternatives, or even whether the Code should dictate that only the termination *-i* should be used whatever the stem. Currently the Code Article 32 requires the original spelling to be used. The Committee does not recommend that this be changed. However, some names that are Latin names or that have been put into Latin form and that correctly terminate in *-ii* have been emended by dropping one *i*. Except for purposes of Homonymy (Art. 58(10)) such names may be available where the emendation is deliberate. In order to avoid the seeking out and recording of such variants in synonymies and nomenclators they would be treated as though they were incorrect subsequent spellings and without nomenclatural status.	
10	Art. 72b "type slide" proposal for protozoa.	26. To provide that in extant species of protozoa, when a taxon cannot be differentiated by a single individual, a number of preserved individuals forming, or presumed to form, a clone and presented in a single preparation may be designated as a holotype or neotype, or selected as a lectotype. Such specimens would have the status of such a type (not syntypes). In consequence of full discussion with protozoologists (the International Congresses of Protozoology and Parasitology), provision would be made in Article 73 for a group of individuals to be treated collectively as a name bearer but, unlike syntypes, not further divisible by lectotype selection from among them.	20

(The associated proposal to allow the type of certain species of protozoa, under certain conditions, to be made up of representatives of successive stages of the life cycle was not published until May 1979 (*Bull. zool. Nom.* vol. 35, pp. 200-208) and will be presented for a vote in a later instalment.)

Vote No.	Article in Code	Commission report to Section on Zoological Nomenclature, Helsinki, 1979, Section B.	V.P.(79)1 Number
11	Art. 73 a – c Art. 74b "holotype" deemed to be lectotype designation	28. That when a species-group taxon is found to be based upon syntypes and was previously wrongly thought to be based upon a single specimen, or when a single specimen is wrongly thought to have been a holotype, that specimen if previously cited in a published work as a holotype shall be deemed to be a lectotype. The Code Article 73a provides that if a nominal species-group taxon is based on one specimen only, that specimen is the holotype, but if more than one specimen provides the basis, those specimens are of equal value in nomenclature (Art. 73 c). The Code makes no provision to protect the status of a name, previously stable because it was thought to be based upon a holotype, that becomes unstable through the discovery that it is based upon syntypes and vulnerable to subsequent selection of a different specimen as lectotype. Stability would be preserved in such cases by giving the specimen previously thought to be a holotype, the status of a lectotype, but protection against selection through mere listing would be provided through making the provisions of Article 73 a (iii) apply.	19
12	Change in presentation in Code.	30. That the term 'epithet' be adopted for the second word of a binomen and the second and third words of a trinomen. The Special Session has considered the effect upon the Code of adopting the term 'epithet' for the second term of a binomen and the second and third terms of a trinomen. The expressions 'specific name' (as used in the Code), 'name of a species', 'name of a species-group taxon', and 'name of a nominal species-group taxon' do not mean the same thing. The Code's present usage dates back to the old Règles. The Editorial Committee has	2

Vote No.	Article in Code	
		Commission Report to Section on Zoological Nomenclature, Helsinki, 1979, Section B. adopted the term epithet in its published (6th) Draft. The effect upon comprehensibility produced by the proposal can be judged by inspection and comparison.
		V.P.(80)2
1	Art. 3 (*Araneus* Clerck)	5. To provide that the generic name *Araneus* Clerck and epithets published in combination with it by Clerck in 1757 and made available for use in zoological nomenclature by the International Congress in 1948 (*Bull. zool. Nom.* vol. 4: 315–319) would have priority as though they were published subsequent to the starting point of zoological nomenclature and in 1758 before the 10th Edition of the *Systema Naturae*. The Paris Congress decided to incorporate a provision in the Code to this effect, but the London Congress decided merely to make an entry referring to the work in the Official List of Works approved for use in Zoological Nomenclature (Direction 104, 1959, *Bull. zool. Nom.* vol. 17: 89-91). The relative priority of names in *Aranei svecici* and *Systema Naturae* (10th Edn), and the year from which all names date, would be made explicit in Article 3 of the Code 'Starting Point'.
2	Art. 10e (Acceptance of names of both primary and secondary subdivisions of genera)	8. That a provision be added to the criteria of availability of genus-group names to provide that, notwithstanding the existing provision that establishes subgeneric rank for names proposed for certain primary subdivisions of genera, a uni-nominal name proposed for a group of species is not made unavailable solely on the grounds that it was proposed for a secondary (or further) subdivision of a genus or subgenus. The present Article was adopted by the London (1958) Congress to meet a particular situation that did appear upsetting to stability. It is implicit in Article 11 f (ii) that names for secondary (and further) divisions of genera are not available. Considering, however, that such names are widespread, and that as they have been generally accepted, their suppression in toto would be even more disturbing, the restriction to primary divisions, even if only implicit, would be deleted. If a uni-nominal name, duly latinized and capitalized (and not merely a specific epithet), is proposed as a name for a group of species, there is no operational

Vote No.	Article in Code	Commission Report to Section on Zoological Nomenclature, Helsinki, 1979, Section B.
		difference between it and a name proposed with the label "gen. nov." and hence no reason to treat it as anything other than a genus-group name even if it was labelled as the name of a "Section" or "Division".
3	Art. 31 (Restoration of Art. 31)	15. That when an epithet formed from a personal name is a noun in the genitive case it is to be formed according to the rules of Latin grammar if the personal name is treated as a Latin word by the author. When it is not, the genitive is to be formed by adding to the stem of the name *-i* if it is that of a man, *-orum* if of men, or of man (men) and woman (women) together, *-ae* if of a woman, and *-arum* if of women. The old Règles, Art. 14c, provided, for epithets that are substantives in the genitive, that 'the genitive is formed in accordance with the rules of Latin declension in case the name was employed and declined in Latin', but 'if the name is a modern patronymic, the genitive is always formed by adding, to the exact and complete name, an *-i* if the person is a man . . .' etc. The 1961 Code, Art. 31, appears to say the same thing, but it omits mention of the genitive: 'A species-group name, if a noun formed from a modern personal name, must end in *-i* if the personal name is that of a man . . . . ' etc. At the International Congress of Zoology in Washington in 1963, it was held that this Article required too many changes in the spelling of long-accepted names, and the Article was changed to the Recommendation 31A ('should usually end in . . . ') of the present Code. For the sake of promoting consistency in the formation of names the Article would be restored for epithets that are nouns in the genitive case formed from personal names.
4	Art. 32d(iii) Correction of family-group names	This proposal was not presented to the Section on Zoological Nomenclature because the corresponding point in *Bull. zool. Nom.* vol. 35, p. 80 was taken by the Special Session to be merely a corollary of Point 9 in V.P.(79)1 (deletion of Article 29d).
5	Art. 33b (Definition of "demonstrably intentional".)	16. That a change in the original spelling of a name shall only be interpreted as 'demonstrably intentional' (and hence be an emendation) when, in the work itself, there is an explicit statement of intention, or when both the original and the changed spelling are cited and the latter is adopted in place of the former, or when two or more names

Vote No.	Article in Code	Commission Report to Section on Zoological Nomenclature, Helsinki, 1979, Section B.
		in the same work are treated in a similar way. Information derived from an author's or publisher's corrigenda would be admissible. In order to determine whether a change in the subsequent spelling of a name is an emendation (and hence possibly, technically, an available name in its own right) the Code Article 33 a (ii) requires zoologists to determine whether a change is demonstrably intentional. When the change is only implicitly intentional a rigorous test would be made mandatory.
6	Art. 40 (Status of family-group names based on emended generic names)	17. That a family-group name based on an unjustified emendation of a generic name is an incorrect original spelling and must be corrected. Under Article 40 it is implicit that, when a family name is found after 1960 to be based upon an invalidly emended generic name, the spelling of the family name continues to follow the secondary form of the generic name, while the name of the type genus reverts to its original form. In such cases the spelling of the name of the family group would automatically change in conformity with that of the type genus.
7	Art. 59c (Junior secondary homonyms)	23. To provide that a junior secondary homonym replaced before 1961 is permanently invalid unless the Commission rules otherwise. The Code Article 59 b (i) stipulates that if the use of a replacement name for a junior homonym replaced before 1961 is contrary to existing usage, existing usage is to be maintained and the matter referred to the Commission. Discretion would be given to an author as to whether to refer such a matter to the Commission. If the author discovering the situation, or another author, considers that the matter should be referred to the Commission, and does so, existing usage would be maintained under Article 80 until the decision of the Commission is published. In the case of junior secondary homonyms that have not been replaced (even if the homonymy had not been overlooked), but are no longer considered to be in the same genus with the senior homonym, replacement would not take place except by a zoologist who believes that the two species-group taxa are congeneric (Art. 59c).

V.P.(80)1 – APPENDIX

Note 1. The recommendations of the Editorial Committee are referred to by

the letters "EC" and those of the Special Session by "Stensoffa". They were confirmed by the General Meeting of the Commission and by the Section on Nomenclature at Helsinki (see covering letter to V.P.(80)1). Mroczkowski was present at Stensoffa but not at Helsinki; Dupuis was present at Helsinki but not at Stensoffa. Thirteen members were present at both places. At Stensoffa (where the discussions were some of the most lively and constructive that any of us have known), only 12 votes were counted on some points, either because the Chairman did not vote, or because Professor Brinck had been called out of the meeting.

Note 2. In the comments on each proposal, various 'groups' are mentioned. These were meetings of zoologists at which the published proposals were discussed. At the North American meetings, votes were counted. The groups were: London (British Museum (Natural History), zoologists, entomologists including Commonwealth Institute of Entomology, and palaeontologists); Washington (National Museum of Natural History, U.S. Department of Agriculture and Department of the Interior, zoologists, palaeontologists and entomologists); Ottawa (Agriculture Canada, entomologists); Houston (Entomological Society of America annual meeting, in an informal group); Kansas (University of Kansas, zoologists and entomologists); and Copenhagen (14 zoologists).

Vote Number	6th Draft Article Number	Subject
1	8	Printing in ink on paper no longer to be obligatory. *EC:* Recommended *Stensoffa:* Recommended *nem. con.** *Comments:* Few, and none published. Most accepted the proposal in recognition of modern technology. See also votes 3 (microcard) and 5 (xerography) below.
2–6	9	Methods that do not constitute publication. *EC:* Recommended *Stensoffa:* Votes 2, 4 and 6 recommended *nem. con.* Vote 3: Both EC and Stensoffa agreed that photographs as such should not constitute publication, but that microcard and microfiche should be accepted. Stensoffa recommended that information sufficient to make new names and acts available should be printed in a full-sized publication. (At Stensoffa, 3 voted against their acceptance.)

* *'Nem. con.'* is an abbreviation of the Latin *nemine contradicente*, meaning 'with no contrary vote'. It is not the same as 'unanimous' because some may have abstained in a *'nem. con.'* vote.

Vote Number	6th Draft Article Number	Subject
2–6 continued (Vote 3)	9	*Comments* (Vote 3) *For accepting microcard and microfiche* Washington group (26:14) Brooke, Key, Corliss ('I doubt that z.n. will be weakened at all by publication by microfiche, which *is* less expensive and is becoming increasingly used for scientific works of merit.') Durham, *Bull.* 34, p. 9. Jeffords ('The best current publication practices . . . seem to be well on the way to being micro-publishing . . . Such publishing is or will become a practical and economic necessity'). *Against* Copenhagen group (14), Houston group (11:2), Ottawa group (6:1), Kansas group (6:1). See also *Bull.* 34, pp. 133–5, vol. 35, pp. 9–10. For general statements of the issue, see *Bull.* 33, pp. 98–104, 34, p.10, 35, p.15.
Vote 5		Xerography *EC:* Recommended *Stensoffa:* Recommended *nem. con.* *Comments:* *For acceptance* Durham *(Bull.* 34, p. 9), Jeffords (we should keep in step with current printing practice), Steyskal (*Bull.* 35, pp. 138–9). *Against* Washington group (27:7), Kansas group (7:0), Houston group (11:2), Ottawa group (6:1). It was after learning of these contrary votes that EC decided to propose that xerography should be accepted provided that the product satisfied the criteria of Article 8. Stensoffa felt strongly that we should go so far to keep up with modern developments.
7a, 7b	30a	Greek and non-Latin epithets to be non-declinable *EC:* Recommended *Stensoffa:* Recommended *nem. con.* *Comments:*

Vote Number	6th Draft Article Number	Subject
		For Brooke, Galbraith, Key, London group, Washington group (12:9), Houston group (7:4), Kansas group (7:0) *Against* Ottawa group (3:2) Steyskal (*Bull.* 35, pp. 139–141) and one person each in the Houston and Ottawa groups thought that Greek epithets should be declined, but not other non-Latin ones. There seems little objection to treating epithets that are neither Latin nor Greek as indeclinable. The difference of opinion concerns Greek epithets. The weight of opinion that they should be treated as indeclinable came, as might be expected, from North America, but even there, there was opinion the other way. Botanists decline Greek epithets. Past usage in z.n. is variable, so whichever decision we take will lead to changes in the spelling of names – either to decline those that have been treated as indeclinable, or *vice versa*. Steyskal's thorough analysis should be studied.
8	32d(i)(2)	Diacritic marks *EC:* The Committee had a variety of proposals before it and did not decisively support any. *Stensoffa:* The Special Session considered a number of possible ways of dealing with the difficult problem of diacritic marks in z.n., including the adoption of the International Standards Organisation method in ISO.833/1974. After prolonged debate, three alternatives were presented for voting, with the understanding that a member who voted for the first was not precluded from voting for the second or third alternative if he was convinced by the continuing discussion. The three propositions and the votes on them were: (1) that as from 1 Jan. 1758 either some diacritic marks should be provided for in the Code (8 in favour) or none at all (5 in favour); (2) that the 1964 Code be restored with modifications to bring it nearer to ISO.833/1974 (9 in favour); and (3) that the method here proposed be adopted. This last proposition was recommended *nem. con.*

Vote Number	6th Draft Article Number	Subject
		Comments: These were varied and complicated, and there was disagreement on the facts. There was general objection to the 'unless' clause ending the provision in the Sixth Draft, and this need not be considered further. The Sixth Draft proposed to extend the existing Code provision to cover Scandinavian diacritics. The comments 'against' listed below include some who opposed any rule on the subject whatever and those who thought all diacritics should simply be deleted. *For* Silfverberg (*Bull.* 35, pp. 146–7, in part), Copenhagen group, Galbraith, Kansas group (5:2), Heppell, Corliss, Mayr, Kerzhner *Against* Brooke (*Bull.* 35, p. 85), Bolton *et al* (pp. 144–5), Holthuis, Key (delete whole provision), London group (retain Code), Washington group (27 for deleting all diacritics, 11 for retaining Code, 9 for Sixth Draft), Houston group (11:0 – 6 favoured deleting whole provision), Ottawa group (5:0), Brooke, Dyte (retain Code), Cowan, 3 Polish zoologists, Crosskey (retain Code), Hahn (wrong to equate German and Scandinavian marks). Note that the old *Règles* provided no rule; they merely recommended that authors forming new names from personal names written sometimes with ä, ö or ü and sometimes ae, oe or ue, should use ae, oe or ue. Many names have been proposed or amended accordingly, and many changes would be necessary if that Recommendation were reversed. The Stensoffa proposal is a compromise that aims to preserve past usage while laying down a simple rule for the future – and one that appears to suit majority opinion.
9	33d	*-i* and *-ii* as permissible alternatives *EC:* Recommended against permissiveness. *Stensoffa:* Rejected 11:2, after which the present proposal was recommended *nem. con.* *Comments:*

Vote Number	6th Draft Article Number	Subject
		For Smith, Stuart & Conant (*Bull.* 27, p. 250–2, the original proposal), Melville (*Bull.* 35, p. 86), Houston group (7:3), Kansas group (7:0), Mayr *Against* Bolton *et al* (*Bull.* 35, p. 145), Brooke (p. 86), Key (p. 148–9), Spilman (p. 150–1), Holthuis, Crosskey, Washington group (12:8), Copenhagen group, Ottawa group (4:2) Some comments said that all such names should end in a single -i, but this is not possible where the personal name in question already ends in -i (Martini, Bonarelli, Ishii). The labour of verifying original spellings is admittedly exasperating, but a liberating provision has proved difficult to draft and would require careful study and later report.
10		Multiple type specimens in cloned protozoa *EC:* Recommended. *Stensoffa:* Recommended *nem. con.* *Comments:* Few. *For* Brooke, Corliss, Key, Holthuis, Washington group, Ottawa group (3:1), Kansas group (5:2). *Against* Houston group (9:2) Discussion at the International Congresses of Protozoology and Parasitology (*Bull.* 35, pp. 200–208 in part) had shown that zoologists directly concerned favoured the proposal, if it was confined to certain extant species of protozoa in which the multiple type specimens were related clonally.
11	73a-c 74b	Published assumption of 'holotype' deemed to be lectotype designation *EC:* Recommended. *Stensoffa:* Recommended *nem. con.* *Comments:* *For* Brooke, Galbraith, London group (large majority), Houston group (10:1), Ottawa group (7:0), Kansas group (6:1)

Vote Number	6th Draft Article Number	Subject
		Against Key (*Bull.* 35, p. 149), Crosskey, Washington group (16:1) This problem concerns cases where it is not clear whether a description is based on one specimen or more than one, and only a single original specimen is known to exist. There are three approaches: (1) published assumption of "holotype", this deemed to be lectotype designation if other syntypes are later discovered; (2) same published assumption, but specimen reverts to syntype status if others are discovered, and a lectotype must be designated; and (3) assumption that the sole specimen might have been a syntype and that it was effectively designated as lectotype. Method (2) is defended by Crosskey (*Bull. B.M.N.H. Entomol.*, vol. 30(5): 272–5 and (3) by Vane-Wright, *ibid.* vol. 32(2): 26–28. Method (3) is of course always binding. It is here recommended that if a 'holotype' was assumed and so published, it be deemed to have been designated as a lectotype if other syntypes are discovered. Cases occur where species thought to have been based on a single holotype are found to have been based on syntypes. If long usage, identifications and taxonomy have been based on an assumption found to be wrong, stability is probably best served by deeming the wrongly-assumed 'holotype' to be a lectotype. This is the solution proposed. The question only arises if and when additional syntypes are found; and the problem will be narrowed by making the proposed rule subject to Article 73a(iii).
12	Entire Code	Adoption of term 'epithet' *EC:* Divided 3:2 *Stensoffa:* 8 for, 3 against, 2 abstentions. *Comments:* *For* Melville (*Bull.* 35, p. 83), Brooke (p. 84), Steyskal (p. 138), Galbraith, Washington group (30:15) *Against* Bolton *et al* (*Bull.* 35, p. 83), three Polish zoologists (p. 147), London group (large majority), Copenhagen group, Riley, Comm. int. Expl. sci. Méditerranée, Crosskey, Houston group (6:5),

Vote Number	6th Draft Article Number	Subject
		Kansas group (4:2)
		Arguments in favour
		1. 'Epithet' avoids the confusion as to whether 'specific name' means a binomen or only the second term of a binomen (and similarly for 'subspecific name').
		2. It is shorter than 'species-group name' or 'name of the species group'.
		3. It is a step in the direction of harmonising zoological and botanical nomenclatural terminology.
		4. Its brevity and clarity make the habit of using it easy to acquire.
		Arguments against
		1. A change in terminology after 75 years would be unfortunate – no other term has been used for the second term of a binomen than 'specific name'.
		2. The meaning of 'species-group name' is said to be self-evident.
		3. The parallel construction in rules dealing with family-group, genus-group and species-group names would be lost.
		4. In botany, 'epithet' includes sub-generic names, and epithets are not regarded as names. Since zoologists cannot accept those propositions, the harmonisation is less evident than it might appear.
1	3	Clerck's 'Aranei svecici'
		EC: Recommended.
		Stensoffa: Recommended, with one vote against.
		Comments:
		None. This is a formal step to deal with apparent misinterpretation by arachnologists of Direction 104 and its antecedents.
2	10e	Secondary divisions of genera
		EC: Recommended.
		Stensoffa: Recommended *nem. con.*
		Comments:
		Cernohorsky (*Bull.* 36, p. 17), Kerzhner, Starobogatov, all in favour. The first two give evidence of general acceptance of such names in Insecta and Mollusca.

Vote Number	6th Draft Article Number	Subject
3	31	Restoration of Article 31 *EC:* Recommended. *Stensoffa:* Recommended *nem. con.* with the proviso that an author has the right to decide whether his epithet is to be treated as a Latin word or a modern patronymic, and in either case to decide what constitutes its stem. Mandatory correction is to apply to incorrectly formed genitives. EC was instructed to draft this provision so as to avoid conflict with Article 32a(ii). *Comments:* Spilman (*Bull.* 35, pp. 150–1), in favour. Eisenmann had some objections, answered by Sabrosky and not pursued. Kerzhner drew attention to drafting problems.
4	32d(iii)	Correction of family-group names *EC:* No clear view. *Stensoffa:* The Special Session took the view that this point was merely a corollary of Point 9 in V.P.(79)1 (deletion of Art. 29d) and therefore did not present it to the Section on Zoological Nomenclature at Helsinki. No vote is called for.
5	33b	Definition of 'demonstrably intentional' *EC:* Recommended. *Stensoffa:* Recommended 7:3 with 2 abstentions. *Comment:* Steyskal, *Bull.* vol. 35, p. 142, regards parts of the provision as too restrictive or ambiguous.
6	40	Correction of family-group names *EC:* Recommended *Stensoffa:* Recommended *nem. con.* *Comments:* None.
7	59c	Junior secondary homonyms *EC:* Recommended *Stensoffa:* Recommended *nem. con.* *Comments:* None.

At the close of the voting period on 19 May, votes had been received in the following order: Melville, Mroczkowski, Holthuis, Sabrosky, Ride, Kraus, Nye, Binder, Halvorsen, Corliss, Hahn, Bayer, Willink, Cogger, Tortonese, Vokes, Brinck, Starobogatov, Welch, Trjapitzin, Heppell, Alvarado, Bernardi. The state of the voting on each point was as follows:

V.P.(80)1

		For	Against
(1)	Article 8, Publication	20	3
(2)	Article 9, Publication	22	1
(3)	Article 9, Publication	20	3
(4)	Article 9, Publication	21	2
(5)	Article 9, Publication (Holthuis voted "for" the first part of this proposal only)	19	3
(6)	Article 9, Publication	22	1
(7a)	Article 30a. That Greek and non-classical	17	6
(7b)	epithets should be indeclinable	22	1
(8)	Article 32d(i), Diacritic marks, especially umlauts	22	1
(9)	Article 33d, -i and -ii as incorrect subsequent spellings	21	2
(10)	Article 72, type slides in protozoa	23	0
(11)	Articles 73a-c, 74b. "Holotype" deemed in certain circumstances to be lectotype designation	22	1
(12)	Presentation of Code: adoption of term "epithet"	10	12

V.P.(80)2

(1)	Article 3, *Aranei svecici* of Clerck, 1757	20	2 (One abstention)
(2)	Article 10e, acceptance of names for both primary and secondary divisions of genera	23	0
(3)	Article 31, restoration of this Article	20	3
(4)	Article 32d(iii), correction of family-group names	(not formally put to vote)	
(5)	Article 33b, definition of "demonstrably intentional"	20	3
(6)	Article 40, status of family-group names based on emended generic names	23	0
(7)	Article 59c, junior secondary homonyms	20	3

No voting paper was returned by Habe. Dupuis abstained on all points.

The following comments were sent in by members of the Commission with their voting papers:

V.P.(80)1
Votes 1–6

Kraus (Vote 1): 'I strictly vote against for the reasons explained in *Bull. zool. Nom.* vol. 34, p. 168 by the Secretary: "In those fields where illustrations are important, microform methods are quite impracticable, for it is not feasible to use numerous readers in comparing illustrations with each other and with specimens (apart from considerations of expense and fatigue), and it is expensive and time-consuming to enlarge such originals to their true size. The results are, moreover, unreliable in quality . . .". As this, without any doubt, is the case, it seems inadequate to include such techniques only in the Recommendation on undesirable processes.'

Bayer (Vote 1): 'Instead of removing completely the "ink on paper" provision, can it not be retained as the preferable one of several alternatives? Although we cannot ignore technological advances, we should try to prevent them from degrading the traditional high standards of our science by making available to all comers the means to produce on the spur of the moment legally acceptable "publication" without any quality control whatever.'

Hahn (Votes 1–6): 'I think the Code should preserve the good old "ink on paper" version to constitute a publication – if not, I cannot see how to differentiate between modern methods that should be allowed and others that should not. If an author wishes to publish in microform or any other modern method, he should best publish a short notice in "ink on paper" so as to give nomenclatural status to his new taxa – a new taxon needs only half a page on average. Therefore I vote against 1, and especially 3 (microcard and microfiche) and 5 (xerography).'

Bayer (Vote 3): 'The drawback of photography as such as a method of duplicating verbal and graphic material (namely, that it is not permanent because it is prone to fading if not adequately processed) applies equally to microcards and microfiche, as they are nothing but photographs.'

Bayer (Vote 5): Accepting xerography (and similar processes) makes available to anyone with access to a typewriter and an electrostatic copier the means to make nomenclaturally acceptable copies without any restrictions or limitations to control quality, availability and date of publication. Even though it has always been possible to print privately (by press, as some have done, by offset lithography, by mimeographing) the cost and availability of the requisite equipment significantly limited the extent to which this was done; use of electrostatic copiers can be had at small cost in hundreds of places – from post offices to banks to duplicating shops, not to mention museums, schools and universities – almost anywhere in the world. Moreover, if the machine happens to mal-

function and the carbon is not satisfactorily fused to the paper, print will rub off and is even more ephemeral than hectographing (gelatine dye-transfer process).'

Holthuis (Vote 5): 'I vote for the first part ("photocopies ... reproductions") but against the second part ("unless ... Article 8")'.

Votes 7a, 7b

Hahn (Vote 7a): 'I follow the arguments of Dr Steyskal that Greek names should be declined, but not other non-Latin names.'

Heppell (Votes 7a, 7b): 'So long as the masculine, feminine and neuter forms are treated as homonyms.'

Kraus (Vote 7b): 'In principle I vote for the proposal – provided that epithets derived from non-classical words or that are arbitrary combinations of letters, but have a Latin ending (*-us, -a, -um*), i.e. are latinised, will continue to be treated as declinable.'

Vote 8

Bayer: 'What happens in cases where unquestionably Latin names are spelled in German orthography so that the ae and oe diphthongs appear as ä and ö? Klunzinger, for one, did this in corals and crustaceans, including names of new taxa (e.g. 1913, *N. Acta Abh. K. Leop, Carol, deutsch. Akad. Naturforsch.* vol. 99 (2), p. 185, where *Actäa mäandrina* Klunzinger n. sp. appears instead of *Actaea maeandrina*).'

Willink: 'Retain Code.'

Vote 9

Tortonese: 'Concerning the endings *-i* or *-ii*, it would be very simple to state that the *-i* be used when there is no terminal -i (e.g. Smith, *smithi*; Bonelli, *bonellii*).'

Vote 10

Holthuis: 'I am for if the words "or presumed to form" are deleted.'

Vote 12

Kraus: 'Against for the reasons listed in the Appendix, page 6; arguments in favour are of minor importance.'

Tortonese: 'The choice of the word "epithet" was very unfortunate. We see no reason for abandoning the usual expression "specific name". With the proposed new situation, a greater importance seems to be given to the genus, and the species (the true reality in nature) is given a somewhat secondary role. In Italian and French, the term "epithet" commonly expresses bad feeling ("he is *ignorant*", "he is a *fool*"; these are epithets).'

Bayer: 'I have from the outset had doubts about the introduction of the term "epithet" into the Code. Although bringing the botanical and zoological procedures and terminologies closer together is a desirable goal, adoption of 'epithet' does not, upon closer scrutiny, effectively further this goal as our usage would require yet another concept of the term. Having thought in greater detail about the matter, I find that I now would not vote in favour of that proposal. As the voting period has not yet closed I would like to ask you to alter my vote to the negative.'

V.P.(80)2

Vote 4

Mroczkowski: 'I vote for deletion of Article 32d(iii) of the 6th Draft.'

Kraus: (A comment in the same sense).

Vote 5

Vokes: 'The words "or when two or more names in the same work are treated in a similar way" need clarification – perhaps by the use of examples.'

DECLARATION OF RESULT OF VOTE

The result of the vote on V.P.(80)1 and V.P.(80)2 is that all the points submitted for a vote except Point 12 in V.P.(80)1 received the two-thirds affirmative majority required under Article 16a(iv) of the Constitution. The publication of this report announces the intention of the Commission to incorporate the proposed amendments into the Code, in accordance with the authority given to it by the Division of Zoology of IUBS at Helsinki, and in words to be prepared by the Editorial Committee for the Commission's approval.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
12 April 1980

OPINION 1160
TIPULA OLERACEA LINNAEUS, 1758 AND RELATED SPECIES (INSECTA, DIPTERA): STABILISATION BY THE USE OF THE PLENARY POWERS

RULING.- (1) Under the plenary powers

(a) all designations of type specimen hitherto made for the nominal species *Tipula oleracea* Linnaeus, 1758, are hereby set aside and the male specimen of which the hypopygium was figured by Mannheims, 1952, *in* Lindner, *Die Fliegen der Palaearktischen Region* (15), p. 77, fig. 39b, from Kochem/Mosel, is hereby designated neotype of that species;

(b) the specific name *paludosa* Fabricius, 1794, as published in the binomen *Tipula paludosa*, and all uses of that name prior to the publication of *Tipula paludosa* Meigen, 1830, is hereby suppressed for the purposes of both the Law of Priority and the Law of Homonymy;

(c) the specific name *fimbriata* Meigen, 1818, as published in the binomen *Tipula fimbriata*, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

(2) The generic name *Tipula* Linnaeus, 1758 (gender: feminine), type species, by subsequent designation by Latreille, 1810, *Tipula oleracea* Linnaeus, 1758, is hereby placed on the Official List of Generic Names in Zoology with the Name Number 2107.

(3) The following specific names are hereby placed on the Official List of Specific Names in Zoology with the Name Numbers specified:

(a) *oleracea* Linnaeus, 1758, as published in the binomen *Tipula oleracea* and as defined by reference to the neotype designated under the plenary powers in (1)(a) above (specific name of type species of *Tipula* Linnaeus, 1758) (Name Number 2715);

(b) *paludosa* Meigen, 1830, as published in the binomen *Tipula paludosa* (Name Number 2716);

(c) *czizeki* de Jong, 1925, as published in the binomen *Tipula czizeki* (Name Number 2717);

(d) *subcunctans* Alexander, 1921, as published in the binomen *Tipula subcunctans* (Name Number 2718).

(4) The following specific names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology with the Name Numbers specified:

(a) *paludosa* Fabricius, 1794, as published in the binomen *Tipula paludosa*, and all uses of that name prior to the publication of *Tipula paludosa* Meigen, 1830, as suppressed under the plenary powers in (1)(b) above (Name Number 1069);

(b) *fimbriata* Meigen, 1830, as published in the binomen *Tipula fimbriata*, and as suppressed under the plenary powers in (1) (c) above (Name Number 1070).

(5) The family-group name TIPULIDAE (correction of Tipulariae) Latreille, [1802]. type genus *Tipula* Linnaeus, 1758, is hereby placed on the Official List of Family-group Names in Zoology with the Name Number 506.

(6) The name Tipulariae Latreille, [1802], an incorrect original spelling of TIPULIDAE, is hereby placed on the Official Index of Rejected and Invalid Family-group Names in Zoology with the Name Number 483.

NOTE ON THE DATE HERE ASSIGNED TO TIPULIDAE LATREILLE

The date of the work in which Latreille proposed the name "Tipulariae" (corrected to TIPULIDAE), the *Consid. gén. partic. Crust. Ins.*, vol. 3, is usually quoted as '[1803]' following Griffin, 1938, *J. Soc. Biblphy nat. Hist.* vol. 1 (5), p. 157. The Commission is indebted to Professor Cl. Dupuis for drawing attention to the *Journal typographique et bibliographique*, 6e année, No. VI, 15 Brumaire, an 11, i.e. [6 November, 1802], where the publication of Latreille's work is announced.

HISTORY OF THE CASE Z.N.(S.)896

An application for the clarification of the meaning of the name *Tipula oleracea* Linnaeus, 1758, was first presented to the Commission by Dr A.M. Hemmingsen and the late Dr H. Lemche on 15 January 1955, but not published until 1960, *Bull. zool. Nom.* vol. 17, pp. 209–213. The subsequent history of the case is set out in the application that led to the present ruling. That application was presented by Dr A.M. Hutson, Dr R.I. Vane-Wright and Dr P.S. Cranston (*British Museum (Natural History) London*) on 7 August 1975. An agreed text was sent to the printer on 27 January 1976 and was published on 26 June 1976 in *Bull. zool. Nom.* vol. 33, pp. 39–45. Public notice of the possible use of the plenary powers in the case was given in the same part of the *Bulletin* as well as to the statutory serials, to seven other general and seven entomological serials.

A comment by Professor L.B. Holthuis correcting the formal proposals to the Commission was published, with a reply by the Secretary, in *Bull. zool. Nom.* vol. 33, p. 150. The application was supported by Professor G.W. Byers (*University of Kansas, Lawrence, Kansas, U.S.A.*). No other comments were received.

DECISION OF THE COMMISSION

On 14 December 1979 the members of the Commission were invited to vote under the Three-Month Rule in Voting Paper (1979) 18, in Part A, for or against the proposals set out in *Bull. zool. Nom.* vol. 33, pp. 44–45, except for the endorsement to paragraph 3c of these proposals; and in Part B, for or against including that endorsement. At the close of the voting period on 14 March 1980 the state of the voting was as follows:

Part A

Affirmative Votes – twenty-two (22) received in the following order: Melville, Holthuis, Bayer, Mroczkowski, Willink, Vokes, Corliss, Tortonese, Alvarado, Brinck, Hahn, Habe, Welch, Trjapitzin, Starobogatov, Sabrosky, Kraus, Ride, Nye, Binder, Halvorsen, Cogger

Negative Votes – two (2): Heppell, Dupuis

Part B

Affirmative Votes – seven (7) received in the following order: Melville, Vokes, Corliss, Alvarado, Hahn, Welch, Sabrosky

Negative Votes – seventeen (17) received in the following order: Holthuis, Bayer, Mroczkowski, Willink, Tortonese, Brinck, Habe, Trjapitzin, Starobogatov, Heppell, Kraus, Ride, Dupuis, Nye, Binder, Halvorsen, Cogger

No voting paper was returned by Bernardi.

The following comments were sent in by members of the Commission with their voting papers:

Heppell: 'After reading the original application by Hemmingsen & Lemche, all the subsequent comments, and the more recent proposals by Hutson, Vane-Wright and Cranston several times I have decided to vote against. Although I am sympathetic with the proponents of the case I am not happy about the particular solution requested. Of the two central issues, the first – that *Tipula oleracea* L. was a composite species as evidenced by the description and the extant specimen – is not too important as no one is advocating the use of the name *oleracea* in the sense of the latter. Of much more importance is the fact that Mannheims' misidentification of *T. oleracea* as species A has been followed more or less uncritically since its publication in 1952, despite the evidence published by Tjeder in 1941 that the name should refer

to Species B. Unquestionably right is on the side of Tjeder and the evidence that the species described by Linnaeus was species B seems to be generally accepted. It is claimed, however, that it is more expedient to disregard Tjeder's conclusions because of the preponderance of incorrect usage outside Sweden. As the main pest species (except possibly in Germany) seems to be species B I am not convinced that nomenclatural stability will be achieved by applying the name *oleracea* (always accepted as a pest species) to a different taxon. As the name *paludosa* Meigen has been used unambiguously for species B, I would have preferred that name to have been retained (with suppression of the earlier but unused homonym *paludosa* Fabricius). I favour the solution proposed by Commissioner Brinck (*Bull. zool. Nom.* vol. 18, p. 135), namely to suppress *oleracea* altogether and use the unambiguous name *submendosa* for species A and *paludosa* for species B. I am sorry there was no opportunity to vote on this alternative as it avoids the fiction of using *oleracea* in a sense contrary to both original description and extant type. While the "neotype" proposed by Hemmingsen and Lemche may serve as a good type of *oleracea* Mannheims, it is certainly an impostor when representing the nominal species so named by Linnaeus. With the suppression of the confused name *oleracea* there would remain no nomenclatural problem concerning species C and the validity of the several contesting names would depend solely on subjective taxonomic judgement and be, as such, of no concern to the Commission.'

Dupuis: 'Je vote contre l'ensemble des propositions et demande leur ajournement. Entre autres raisons de mon refus, essentiellement fondé sur mon allergie aux néotypes (qui sont toujours des faux), je donne les suivantes:

(1) il me paraît insensé de désigner un néotype pour une espèce linnéenne dont le type existe;

(2) en violation de l'esprit du Code, Art. 75c(1, 2, 6), la proposition (1)(a) ne désigne pas comme néotype un spécimen, mais une figure, et ne donne pas le nom de l'institution qui conserve le spécimen figuré;

(3) le rejet de *fimbriata* Meigen, 1818, me paraît inexplicable;

(4) les propositions (2), (5) et (6) ne dépendent pas des décisions relatives aux autres points;

(5) l'histoire du cas, dans *Bull. zool. Nom.* vol. 33, pp. 39–45, renvoie aux tomes 17, 18, 19 du *Bulletin* sous une forme trop sommaire.'

ORIGINAL REFERENCES

The following are the original references to names placed on Official Lists and Official Indexes by the ruling given in the present Opinion:

czizeki, Tipula, de Jong, 1925, Een Studien over Emelten en haare bestrijding, *Verh. Mededeel. Plantenz. Dienst Wageningen*, p. 42

fimbriata, Tipula, Meigen, 1818, *Syst. Beschr. zweifl. Ins.*, vol. 1, p. 190

oleracea, Tipula, Linnaeus, 1758, *Syst. Nat.* ed. 10, vol. 1, p. 585

paludosa, Tipula, Meigen, 1830, *Syst. Beschr. zweifl. Ins.*, vol. 6, p. 289

subcunctans, Tipula, Alexander, *Ann. entomol. Soc. America*, vol. 14, p. 127

Tipula, Linnaeus, 1758, *Syst. Nat.* ed. 10, vol. 1, p. 585

Tipulariae Latreille, [1802], *Hist. nat. gén. partic. Crust. Ins.*, vol. 3, p. 419

TIPULIDAE Latreille, [1802], correction of preceding

paludosa, Tipula, Fabricius, 1794, *Entomol. Syst.*, vol. 4, p. 239

The following are the original references to type designations accepted in the ruling given in the present Opinion: of *Tipula oleracea* Linnaeus, 1758, as type species of *Tipula* Linnaeus, 1758, by Latreille, 1810, *Consid. gén. Anim. Crust. Arachn. Ins.*, pp. 442, 379; of a specimen in the Zoologisches Forschungsinstitut A. Koenig, Bonn, as neotype of *Tipula oleracea* Linnaeus, 1758, by Hemmingsen, A.M. & Lemche, H., 1960, *Bull. zool. Nom.* vol. 17, pp. 212–213.

CERTIFICATE

I certify that the votes cast on V.P.(79)18 were cast as set out above, that the proposal contained in Part A of that voting paper has been duly adopted under the plenary powers and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1160.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
16 April 1980

OPINION 1161
CHAITOPHORUS C.L. KOCH, 1854 (INSECTA, HEMIPTERA): DESIGNATION OF A TYPE SPECIES BY USE OF THE PLENARY POWERS

RULING.- (1) Under the plenary powers, all designations of type species hitherto made for the nominal genus *Chaitophorus* C.L. Koch, 1854, are hereby set aside and the nominal species *Chaitophorus leucomelas* is hereby designated as type species of that genus.

(2) The generic name *Chaitophorus* C.L. Koch, 1854 (gender: masculine), type species by designation under the plenary powers in (1) above, *Chaitophorus leucomelas* C.L. Koch, 1854, is hereby placed on the Official List of Generic Names in Zoology with the Name Number 2108.

(3) The specific name *leucomelas* C.L. Koch, 1854, as published in the binomen *Chaitophorus leucomelas* (specific name of type species of *Chaitophorus* C.L. Koch, 1854) is hereby placed on the Official List of Specific Names in Zoology with the Name Number 2719.

HISTORY OF THE CASE Z.N.(S.)1003

An application from Dr Hille Ris Lambers (*Bladluisonderzoek T.N.O., Bennekom, Netherlands*) and Dr H.L.G. Stroyan (*Plant Pathology Laboratory, Harpenden, U.K.*) for a ruling on the type species of *Chaitophorus* C.L. Koch, 1854, was first received on 8 August 1955. Although an agreed draft had in fact been prepared by 1960, due to a misunderstanding it was not sent to the printer until 16 May 1975. It was published on 22 September 1975 in *Bull. zool. Nom.* vol. 32, pp. 141–142. Public notice of the possible use of the plenary powers in the case was given in the same part of the *Bulletin* as well as to the statutory serials, to five other general and seven entomological serials. No comment was received.

DECISION OF THE COMMISSION

On 14 December 1979 the members of the Commission were invited to vote under the Three-Month Rule on Voting Paper (79) 19 for or against the proposals set out in *Bull. zool. Nom.* vol. 32, p. 142. At the close of the voting period on 14 March 1980 the state of the voting was as follows:

Affirmative Votes – twenty-four (24) received in the following order: Melville, Holthuis, Bayer, Mroczkowski, Willink,

Vokes, Corliss, Tortonese, Trjapitzin, Alvarado, Brinck, Hahn, Habe, Heppell, Welch, Starobogatov, Sabrosky, Kraus, Ride, Dupuis, Nye, Binder, Halvorsen, Cogger

Negative Votes – none (0)

No voting paper was returned by Bernardi.

Professor Hahn commented in returning his voting paper: 'As far as I can see there are problems with all three species selected in the past as type species of *Chaitophorus*. *Aphis populi* is misidentified and apparently not clearly separated from *A. populeti*; *Aphis aceris* is a mixture of two species which belong to a different genus; and *C. leucomelas* was separated by Börner, 1952, and transferred to *Eichochaitophorus*. Lambers & Stroyan state that "all later authors consider *Eichochaitophorus* to be a junior synonym of *Chaitophorus*", but they do not give any supporting references nor say how many authors have dealt with this problem since 1952. They also do not mention other undoubtedly included species of *Chaitophorus* – are there none?' [*Chaitophorus* was originally established with 12 included species. R.V.M.]

ORIGINAL REFERENCES

The following are the original references for names placed on Official Lists by the ruling given in the present Opinion:

Chaitophorus C.L. Koch, 1854, *Die Pflanzenläuse, Aphiden, getreu nach dem Leben abgebildet und beschrieben*, p. 1

leucomelas, Chaitophorus, C.L. Koch, 1854, *ibid.*, pp. 4–5, figs. 5, 6.

CERTIFICATE

I hereby certify that the votes cast on V.P.(79)19 were cast as set out above, that the proposal contained in that voting paper has been duly adopted under the plenary powers, and that the decision so taken, being the decision of the International Commission on Zoological Nomenclature, is truly recorded in the present Opinion No. 1161.

R.V. MELVILLE
Secretary
International Commission on Zoological Nomenclature
London
16 April 1980

ARTEMIA LEACH, 1819 (CRUSTACEA, BRANCHIOPODA): PROPOSED CONSERVATION Z.N.(S.)1984.

By J.H. Lochhead (*Home address: 49 Woodlawn Road, London, SW6; formerly of Department of Zoology, University of Vermont, Burlington, Vermont 05405, U.S.A.)*

This application, which was largely prepared at the *Biologische Station, Lunz am See, Austria*, proposes that the generic name *Artemia* Leach, 1819 (Crustacea, Branchiopoda, Anostraca) be conserved by the suppression of its senior synonyms *Artemisia* Latreille, 1817, and *Artemisus* Lamarck, 1818. It also proposes that *Artemia* Leach, 1819, be given nomenclatural precedence over *Eulimene* Latreille, 1817, whenever the two names are regarded as synonyms.

2. For well over a hundred years the brine shrimp has almost universally been referred to by zoologists as *Artemia*, usually as *Artemia salina* (Linnaeus, 1758, p. 634). Because of the very large literature dealing with this animal, and with its morphological variation according to changes in salinity, it is especially important that *Artemia* should remain the valid name of the genus. The present proposal is intended to forestall any resurrection of certain names that were published prior to the first known publication of *Artemia*.

3. Most of the curious history involved in this case has been reviewed by Kuenen & Baas-Becking, 1938. In brief, Latreille, 1817a, p. 68, stated, without any reference, that the name *Artemisia* had been proposed by Leach for *Cancer salinus* Linnaeus, 1758. Lamarck, 1818, p. 135, followed by proposing the name *Artemisus* (in French, Artémis), because *Artemisia* was proposed for a plant. In 1819 Leach replied to both Latreille and Lamarck, stating (without any reference) that the name he had earlier proposed had been *Artemia*, not *Artemisia*. However, no such proposal has ever been found among Leach's earlier papers, despite serious efforts by Dr. Barbara Gilchrist (personal communication), myself, and others.

4. The danger therefore exists that someone might try to resurrect one of the names introduced by Latreille and Lamarck, as has already been attempted by Keilhack, 1909, for *Artemisia*. (The status of *Artemis* Thompson, 1834, is considered below.) However, I know of no use of either *Artemisia* or *Artemisus* as valid names in the last fifty years, during which time the name *Artemia* has been used in many publications. It therefore appears that *Artemisia* and *Artemisus* can be considered as unused senior synonyms and that they can be suppressed under the plenary powers (Articles 23a-b

and 79b; *Bull. zool. Nom.* vol. 31, pp. 79, 81, 87, 89). In this connection, it should perhaps be noted that the very similar name *Artemesia* Bate, 1888, is in current use for a genus of penaeid shrimps.

5. *Artemia* was (so far as is known) first proposed by Leach, 1819, p. 543, for two species, *Cancer salinus* Linnaeus, 1758, and *Artemia eulimene* Leach, the latter an unnecessary replacement name for *Eulimene albida* Latreille, 1817a, p. 68. The genus was thus established with two included species. I cannot find that either of those species has ever been designated type species, and I therefore now so designate *Cancer salinus* Linnaeus, 1758.

6. *Artemis* was proposed by Thompson, 1834, p. 104, apparently as a *bona fide* new name, with *Artemis salinus* [*sic*] (presumably *Cancer salinus* Linnaeus, 1758) as one of four species included in the genus, and without proper references to previous literature. *Artemis* Thompson is, therefore, a junior objective synonym of *Artemia* Leach and so would seem to be available as a replacement name for it, should one be necessary. However, *Artemis* Thompson is objectively invalid, being a junior homonym of *Artemis* Kirby & Spence, 1828, *Introd. Entomol.* (ed. 5), vol. 3, pp. 248, 641, a genus of moths. Although *Artemis* Kirby & Spence is itself a junior objective synonym of *Actias* Leach, 1815, it preoccupies for the purposes of the Law of Homonymy, so that *Artemis* Thompson cannot, in fact, be used.

7. More debatable is the question of what to do with the name *Eulimene* Latreille, 1817a, 1817b, proposed for a new species, *Eulimene albida,* from the Mediterranean near Nice. As we have seen, this species was included by Leach, 1819, in *Artemia.* Desmarest, 1825, and Lucas, 1840, retained Latreille's genus, but all other authors seem to have followed Leach. Baird, 1854, and Simon, 1886, believed that Latreille had described *Eulimene albida* from poorly preserved specimens of *Artemia salina.* Simon, 1886, thought that *Eulimene* was preoccupied, presumably because Péron & Lesueur, 1809, had proposed *Eulimenes* for a hydrozoan hydroid. However, according to the present Code, the difference in spelling of one letter is enough to prevent homonymy here. Schulze & Kükenthal, 1929, list *Eulimenes* Péron & Lesueur as a *nomen nudum*, but they were wrong, for there is a line of generic diagnosis and the genus includes two named, described and illustrated species.

8. One dried, female specimen of *Eulimene albida* from Leach's collection is in the British Museum (Natural History). I have looked at this specimen but found details difficult to observe. I can say only that the general appearance is that of an *Artemia* and that the caudal furca is almost or completely absent. If this last feature is not a result of breakage, the specimen must indeed be an

Artemia, from brine of a very high salinity. On the other hand, the specimen looks darker and more heavily sclerotised than do dried specimens of *Artemia salina* from the same period, and I have not heard of any brine pools suitable for *Artemia* in the neighbourhood of Nice.

9. At some future date a more detailed study of the specimen in London may become possible with special methods, or additional specimens may be found in museums in France or elsewhere. It may then be found that *Eulimene* does not belong in the genus *Artemia* and just conceivably that it is generically distinct from all other anostracans. Should the name *Eulimene* be kept available for such an unlikely eventuality, or should the name be suppressed to forestall its possible use in place of *Artemia*? As a solution to this problem I suggest that the Commission be asked to rule that *Artemia* is to be given nomenclatural precedence over *Eulimene* whenever the two names are regarded as synonyms. Zoologists would thus be left free to use *Eulimene* for a taxon other than that denoted by *Artemia*.

10. The following brief statement concerning papers published since the time of Leach should suffice to indicate the almost universal use of his name *Artemia* for the brine shrimp. I have been able to find only three papers in which one of the earlier names is used in place of *Artemia*. There were also three authors, prior to 1860, who incorporated *Artemia* within *Branchipus*. On the other hand, among nineteen general or monographic treatments of the Branchiopoda published between 1825 and 1962, in only one (Keilhack, 1909) is the name *Artemia* not used; of eight authors who have published ten or more non-taxonomic papers on the brine shrimp, all have used *Artemia*; and from among the 402 papers on the brine shrimp listed by Littlepage & McGinley, 1965, I know of only four, published between 1834 and 1914, that do not employ the name *Artemia* (references from which these data have been drawn are on file with the Secretary to the Commission). The following references meet the requirements of Article 79b: Barigozzi, C. & Fantoni, L. 1941, *Monit. zool. ital.* vol. 53, pp. 69–74; Benesch, R. 1969. *Zool. Jahrb., Abt. Anat. Ontog. Tiere* vol. 86, pp. 307–458; Boone, E. & Baas-Becking, L.G.M. 1931. *J. gen. Physiol.* vol. 14, pp. 753–763; Czeczuga, B. 1971. *Comp. Biochem. Physiol.* vol. 40B, pp. 47–52; Fautrez-Firlefyn, N. 1957. *Arch. Biol.* vol. 68, pp. 249–296; Fränsemeier, L. 1939. *Z. wiss. Zool., Abt.* A vol. 152, pp. 439–472; Gilchrist, B.M. & Green, J. 1960. *Proc. roy. Soc. London* (B) vol. 152, pp. 118–136; Grosch, D.S. 1962. *Biol. Bull.* vol. 123, pp. 302–316; Mead, G.C. & Finamore, F.J. 1969. *Biochemistry* vol. 8, pp. 2652–2655; Stefani, R. 1968. *Riv. Biol.* vol. 60, pp. 599–615.

11. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers
  (a) to suppress the following generic names for the purposes of the Law of Priority but not for those of the Law of Homonymy:
    (i) *Artemisia* Latreille, 1817;
    (ii) *Artemisus* Lamarck, 1818;
  (b) to rule that *Artemia* Leach, 1819, is to be given nomenclatural precedence over *Eulimene* Latreille, 1817, whenever the two names are regarded as synonyms;

(2) to place the following names on the Official List of Generic Names in Zoology:
  (a) *Artemia* Leach, 1819 (gender: feminine), type species, by subsequent designation herein, *Cancer salinus* Linnaeus, 1758, with an endorsement that it is to be given nomenclatural precedence over *Eulimene* Latreille, 1817, whenever the two names are regarded as synonyms;
  (b) *Eulimene* Latreille, 1817 (gender: feminine), type species, by monotypy, *Eulimene albida* Latreille, 1817, with an endorsement that it is not to have priority over *Artemia* Leach, 1819, whenever the two names are regarded as synonyms;

(3) to place the following names on the Official List of Specific Names in Zoology:
  (a) *salinus* Linnaeus, 1758, as published in the binomen *Cancer salinus* (specific name of type species of *Artemia* Leach, 1819);
  (b) *albida* Latreille, 1817, as published in the binomen *Eulimene albida* (specific name of type species of *Eulimene* Latreille, 1817);

(4) to place the following names on the Official Index of Rejected and Invalid Generic Names in Zoology:
  (a) *Artemisia* Latreille, 1817, as suppressed under the plenary powers in (1) (a) (i) above;
  (b) *Artemisus* Lamarck, 1818, as suppressed under the plenary powers in (1) (a) (ii) above.

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MELITHAEA MILNE EDWARDS & HAIME, 1857 AND *ISIS OCHRACEA* LINNAEUS, 1758 (COELENTERATA, ANTHOZOA): PROPOSED CONSERVATION Z.N.(S.)2150

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The name *Melitea* was first published for a genus of octocorals by Lamouroux, 1812, p. 188, including one valid species, *Isis ochracea* Ellis (= *Isis ocracea* Linnaeus, 1758), and three nomina nuda. The name *Melitaea* was published for the same genus of octocorals by Lamarck, 1816, p. 297, an erroneous subsequent spelling of *Melitea* Lamouroux.

2. *Melitea* Lamouroux, 1812, is preoccupied by *Melitea* Péron & Lesueur, 1810, proposed for a genus of Scyphozoa. The spelling *Melitaea* as incorrectly used by Lamarck, 1816, for *Melitea* Lamouroux, 1812, has been used before, viz. by Fabricius, 1807, for a new genus of Lepidoptera. Therefore, even if *Melitaea* Lamarck, 1816 was an available name, it would be preoccupied by the available *Melitaea* Fabricius, 1807.

3. The name *Melithaea* was first used by Milne Edwards & Haime, 1857, p. 199, for the genus of octocorals called *Melitea* by Lamouroux, 1812. Owing to the absence of any specific statement, and to the numerous errors demonstrable in this work, the name *Melithaea* must be interpreted as an incorrect subsequent spelling of *Melitea* Lamouroux, 1812, not a replacement name for a homonym, and is therefore unavailable under Art. 33(b) of the International Code of Zoological Nomenclature.

4. A.E. Verrill, 1864, p. 38, recognized the homonymy of *Melitea* Lamouroux, 1812, which Verrill spelled *Melitaea*, and expressly proposed the name *Melitodes* as a replacement.

5. Subsequent to 1864, all workers accepted *Melitodes* Verrill, except Kölliker, 1865; Gray, 1870; and Klunzinger, 1877. At least 10 usages of *Melitodes* appeared between 1864 and 1956, including Hickson's extensive study of the family MELITODIDAE in 1937.

6. Utinomi, 1956a, p. 226, resurrected *Melithaea* Milne Edwards & Haime, 1857, for the octocoral, saying: 'Since the emendation by Verrill (1864), the name *Melitodes* has long been used for the genus as a substitute for *Melitea* or *Melitaea*. However, the older name *Melithaea* which has been used by H. Milne Edwards

(1857), Kölliker (1865) and Gray (1870) but not by later workers, is not to be treated as a homonym of such names according to the latest Copenhagen Decisions on Nomenclature (1953). There is no decisive evidence to prove whether it is a substitute name for *Melitaea* or the result of only an inadvertent error in spelling, but the new genus name *Melitodes* was not accepted by Gray (1870) merely quoting a suggestion of Verrill without comment. For the above reasons it seems better to retain the name *Melithaea* for the genus instead of *Melitodes*'.

7. Utinomi's action was legal under Article 34 of the *Règles Internationales de Nomenclature Zoologique* because Opinion 147 (which would have rendered *Melithaea* Milne Edwards & Haime, 1857, a homonym of *Melitaea* Fabricius, 1807, *Melitea* Péron and Lesueur, 1810, and *Melithea* Selys de Longchamps, 1837) was repealed by the Copenhagen Decisions. However, it was illegal under additions to Article 19, promulgated at Copenhagen, since it is an incorrect subsequent spelling and so not available as a replacement name.

8. Since 1956, all workers have followed Utinomi's reintroduction of *Melithaea* Milne Edwards & Haime, 1857, for the genus of octocorals in preference to *Melitodes* Verrill, 1864. At least 14 usages have appeared, including Utinomi 1956a, 1956b, 1958, 1964, 1969; Bayer 1956a, 1956b, 1957, 1959; Uchida *in* Okada 1960; Tixier-Durivault 1966; Mai Bao Thu 1970; Faulkner, 1974; Faulkner & Chesher, 1979; and Muzik & Wainwright, 1977. Among these works is the *Treatise on Invertebrate Paleontology* (Bayer, 1956a), which is a work that has received wide distribution and application outside the immediate limits of systematics.

9. In view of the preponderance of usage of *Melithaea* for the well-known genus of octocorals since its reintroduction by Utinomi, it seems desirable to retain it rather than to return to the use of *Melitodes* after its abandonment for nearly twenty years.

10. The name *Melitea* Péron & Lesueur, 1810, has never been used for a scyphozoan since its original publication, although it was misspelled *Melitaea* by Gistl, 1848. Both Mayer, 1910, and Kramp, 1961, fail even to mention it in their comprehensive works on medusae.

11. The name *Melitaea* Fabricius, 1807, is in current use for a genus of butterflies, a group so far removed from the Octocorallia that little likelihood of confusion with it exists.

12. The specific name *ocracea*, as published in the combination *Isis ocracea* Linnaeus, 1758, is the valid original spelling of the name of the type-species of the genera *Melitea* Lambouroux, 1812, and *Melithaea* Milne Edwards & Haime, 1857, in spite of Linnaeus' emendation to *ochracea* in the 12th edition of the Systema Naturae,

1767, p. 1287. From then until 1956, when Bayer employed the original spelling, *ochracea* was the predominant spelling for the species. Since 1956, both spellings have been used without a clear-cut majority for either. Therefore, it seems preferable to accept the incorrect subsequent spelling *ochracea* in view of its overall predominance since 1767, and its evident derivation from the Greek word *ochros*.

13. The International Commission on Zoological Nomenclature is therefore requested:

(1) to use its plenary powers to rule that:
   (a) the name *Melithaea* as used by Milne Edwards & Haime, 1857, vol. 1, p. 199, for the genus *Melitea* Lamouroux, 1812, is available and is to be treated as an unjustified emendation of *Melitea* Lamouroux, 1812;
   (b) the spelling *ochracea, Isis*, as used by Linnaeus, 1767, p. 1287, is to be treated as a justified emendation of the specific name *ocracea*, (an incorrect original spelling published in the binomen *Isis ocracea* Linnaeus, 1758, p. 799);

(2) to place on the Official List of Generic Names in Zoology the name *Melithaea* Milne Edwards & Haime, 1857, made available by use of the plenary powers in (1) (a) above (gender: feminine), type species through *Melitea* Lamouroux, 1812, *Isis ochracea* Linnaeus, 1758, as validated by use of the plenary powers in (1) (b) above;

(3) to place on the Official List of Specific Names in Zoology the name *ochracea* Linnaeus, 1758, as published in the binomen *Isis ocracea*, and as validated by use of the plenary powers in (1) (a) above (specific name of type species of *Melithaea* Milne Edwards & Haime, 1857);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology;
   (a) *Melitea* Lamouroux, 1812, a junior homonym of *Melitea* Péron & Lesueur, 1810 (Medusae).
   (b) *Melitodes* Verrill, 1864, a junior objective synonym of *Melithaea* Milne Edwards & Haime, 1857.

(5) to place on the Official Index of Rejected and Invalid Specific Names in Zoology, the name *Isis ocracea* Linnaeus, 1758, ruled by use of the plenary powers in (1) (b) above to be an incorrect original spelling of *Isis ochracea* Linnaeus, 1758.

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GEOEMYDA GRAY, 1834, AND *RHINOCLEMMYS* FITZINGER, 1835 (REPTILIA, TESTUDINES): PROPOSED CONSERVATION Z.N.(S.)2287

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The tropical and subtropical Eurasian and American turtle genus *Geoemyda* Gray, 1834, *sensu lato* as of Wermuth & Mertens, 1977, pp. 28–36, contains at least 28 extant species and subspecies and at least 7 and probably 32 or more extinct species. The American representatives of this group embrace 13 extant species and subspecies as reviewed by Ernst, 1978, pp. 113–134, and probably about 25 extinct species; they are regarded at present as constituting a monophyletic group, *Rhinoclemmys* Fitzinger, 1835, now as frequently interpreted as a subgenus (e.g., Wermuth & Mertens, *op. cit.*; Khosatzky & Mlynarski, 1966, p. 397) as a genus (McDowell, 1964, p. 267; Ernst, *op. cit.*). The names for both of these groups (here categorized as genera for the sake of convenience), *Geoemyda* Gray, 1834, and *Rhinoclemmys* Fitzinger, 1835, are threatened. It is the purpose of this proposal to conserve the currently used names by suppression of their unused senior synonym.

2. The earliest available generic name for a taxon containing nominal species now referred to *Rhinoclemmys* Fitzinger, 1835, is *Chemelys* Rafinesque, 1832. The name was used by the same author in 1815, but is there a *nomen nudum*. Along with six other generic names, however, *Chemelys* was, in 1815, placed by Rafinesque in the subfamily 'Emidania', characterized as follows: 'Carapace not leathery, no hinges, digits free or webbed.' In the 1832 work no suprageneric categories were dealt with, but each new genus was briefly characterized and one or two species assigned to it. The whole account for *Chemelys* stated: 'Warty scales, no valves, 4 toes to all the feet. *T. verrucosa* etc.' These characters, particularly in combination with the subfamily characters given in 1815, leave no question that no member of the family TRIONYCHIDAE was intended, since all have leathery shells and were placed in another subfamily so characterized in 1815, in the genus *'Trionix* Geof.' (given as *'Trionyx'* in 1832).

3. The family intended by Rafinesque is of some impor-

tance, since the name *verrucosa* had been used to denote two different species of turtle by 1832. For one, Schoepff, 1795, pp. 90 and 105, established '*Testudo* (*ferox*?) *verrucosa*' from eastern Florida that is now recognized as a junior synonym of *Testudo ferox* Schneider, 1783 (= *Trionyx ferox* of today). As a trionychid, lacking 'scales', this name could not have been intended by Rafinesque in citing '*T. verrucosa*'.

4. Walbaum, 1782, p. 116, published the name *Testudo verrucosa*, which Wermuth, 1956, p. 403, allocated to what is now known as *Rhinoclemmys punctularia* (Daudin, [1801]). It was a name adopted as valid only by one other person (Suckow, 1798, p. 40) as *Testudo verrucosa*, and it was overlooked by subsequent authors until 1956 when Wermuth commented at some length on its proper disposition. Wermuth regarded Walbaum's name as 'illegitimate' (i.e., not available for nomenclature) on grounds of the entire work being non-binominal (see also Wermuth & Mertens, 1977, p. 31). Wermuth did however accept '*Testudo verrucosa* Suckow, 1798' as available for nomenclature, but rejected its use as a valid name on the grounds of it being a junior primary homonym of *Testudo verrucosa* Schoepff, 1795.

5. Three facts relative to *Testudo punctularia* Daudin, [1801] are pertinent to the present consideration: (1) that name was conserved for its species in Opinion 660 of the I.C.Z.N., 1963, p. 187, placing it on the Official List; (2) its senior synonym, *Testudo dorsata* Schoepff, 1801 was suppressed for the purposes of the Law of Priority by use of the plenary powers in the same Opinion; and (3) *punctularia* Daudin, [1801], is the valid name for *Testudo dorsata* Schoepff, 1801, the type species of *Rhinoclemmys* Fitzinger, 1835, by subsequent designation by Lindholm, 1929, p. 283.

6. Although *Testudo verrucosa*, whether accepted from Walbaum or Suckow, cannot be used as a valid name, it is acceptable as the type species of *Chemelys* Rafinesque, 1832. However, *Chemelys* has never been used as a valid name in any context, having been considered by Romer, 1956, p. 514; Applegarth, 1973, pp. 4 and 22; Pritchard, 1975, p. 14; and Wermuth & Mertens, 1977, p. 104, as a junior synonym of *Trionyx* Geoffroy, 1809. Only Webb, 1973, p. 2, has clearly shown that *Chemelys* cannot be a trionychid, and is properly assigned to the genus now known as *Rhinoclemmys*. No one else, so far as we can determine, has mentioned the name. As explained previously, allocation to *Trionyx* is completely untenable. *Chemelys* is a senior subjective synonym of *Rhinoclemmys* Fitzinger, 1835, as the type species of each is a subjective synonym of *Testudo punctularia* Daudin, [1801].

7. The consensus among herpetologists we have consulted is that the stability of nomenclature would be better served by suppressing Rafinesque's name and hence conserving *Rhinoclemmys* Fitzinger. *Rhinoclemmys* has been accepted either as a genus or as a subgenus of *Geoemyda* Gray in application to tropical American species by most workers since 1964 when McDowell segregated it from *Geoemyda*. Species have been referred to *Geoemyda* since 1902 when Stejneger pointed out that *Nicoria,* used prior to that date, was not the proper name. General adoption of *Nicoria* stemmed from 1889 (Boulenger), but prior to that time, and even to a certain extent in the early 1900s, *Chelopus, Emys, Rhinoclemmys, Geoclemmys, Callichelys, Clemmys* and even *Chrysemys*, or spelling variants of these and of *Geoemyda*, were used in a pattern of much uncertainty and confusion. Thanks to the work of recent investigators, particularly McDowell, the taxonomic uncertainties have been largely removed and nomenclatural stability is now the greatest need. An attempt to resolve the matter was essayed in 1976 (Smith, Smith & Sawin) with resurrection of the completely overlooked name *Callopsis* Gray, 1863, to supplant both *Rhinoclemmys* Fitzinger, 1835 and *'Rhinoclemys'* of Gray, 1863, both of which were regarded as unavailable (the first through having a type species whose name had been suppressed, the second as an incorrect subsequent spelling). In reality *Rhinoclemmys* Fitzinger is available as the suppression by the Commission of the name of its type species only prevents the use of the specific name itself. A restitution of *Rhinoclemmys* as a valid genus (or subgenus of *Geoemyda*) was subsequently proposed by Smith, 1978, following the initial defence of *Rhinoclemmys* by Fretey, Hoogmoed and Lescure, 1977. Obviously these changes are extremely disturbing to nomenclatural stability. Furthermore, *Chemelys* Rafinesque, if not suppressed, would also replace *Geoemyda* Gray, 1834.

8. Khosatzky & Mlynarski, 1966; Mlynarski, 1976; and Wermuth & Mertens, 1977, for example – all important revisionary or synoptic works – recognized the genus *Geoemyda* with four subgenera (*Geoemyda* Gray, 1834; *Heosemys* Stejneger, 1902; *Melanochelys* Gray, 1869; *Rhinoclemmys* Fitzinger, 1835). *Chemelys* Rafinesque, 1832, if not suppressed, would replace *Geoemyda* as the name of the genus, and in consequence would also replace *Rhinoclemmys* as a subgeneric name.

9. Since Rafinesque's *Chemelys* is a bona fide *nomen oblitum*, having never been used as a valid name from the time of its original proposal, suppression of the name under Article 79 is justified providing the names that would be replaced by it, in application of the Law of Priority, can be shown to have been

used during the past 50 years by at least 5 different authors in at least 10 different publications.

10. *Geoemyda* Gray has been accepted by all critical authors ever since Stejneger, 1902, p. 238, pointed out its proper application. Within the past 50 years examples of the most authoritative usages include M. Smith, 1931, p. 88; Mertens & Wermuth, 1955, p. 350; Wermuth & Mertens, 1961, p. 82; Kuhn, 1964, p. 86; McDowell, 1964, p. 269; Khosatzky & Mlynarski, 1966, p. 397; Pritchard, 1967, p. 108; Mlynarski & Wermuth, 1975, p. 100; Mlynarski, 1976, p. 81; and Wermuth & Mertens, 1977, p. 28. Many others could be listed, but those cited are all major contributions.

11. *Rhinoclemmys* was revived by Schmidt in 1928 as a full genus, by Lindholm in 1929 as a subgenus, and by McDowell in 1964 as a full genus, although the name was used frequently long before, by Gray in the 1863–1873 era. Since 1927, however, *Rhinoclemmys* Fitzinger, 1835, or its incorrect subsequent spelling '*Rhinoclemys*' of Gray, 1863, has been used by Schmidt, 1928, p. 193, genus *Rhinoclemmys*; Lindholm, 1929, p. 184, subgenus *Rhinoclemmys*; Froes, 1957, p. 9, genus *Rhinoclemmys*; McDowell, 1964, p. 267, genus '*Rhinoclemys*'; Khosatzky & Mlynarski, 1966, p. 397, subgenus '*Rhinoclemys*'; Smith & Taylor, 1966, p. 12, genus *Rhinoclemmys*; Zug, 1966, p. 3, genus '*Rhinoclemys*'; Casas Andreu, 1967, p. 61, genus *Rhinoclemmys*; Zug, 1971, p. 40, genus '*Rhinoclemys*'; Ernst & Barbour, 1972, p. 277, genus '*Rhinoclemys*'; Meyer & Wilson, 1973, p. 2, genus *Rhinoclemmys*; Mlynarski & Wermuth, 1975, pp. 100, 487, subgenus '*Rhinoclemys*'; Winokur & Legler, 1975, p. 278, genus '*Rhinoclemys*'; Fretey, Hoogmoed & Lescure, 1977, p. 63, genus *Rhinoclemmys*; Wermuth & Mertens, 1977, p. 29, subgenus *Rhinoclemmys*; and Smith, 1978, genus *Rhinoclemmys*. A number of other usages at least of '*Rhinoclemys*' could be cited. Aside from the aborted attempt (Smith, Smith & Sawin, 1976) to establish *Callopsis* for the American genus (or subgenus), and several subsequent usages of that name by various authors, all informed references to that genus (or subgenus) have employed the name *Rhinoclemmys* or the incorrect subsequent spelling *Rhinoclemys*, since 1964, although the name was used sporadically prior to that date.

12. As there is no reasonable doubt that the type species of *Chemelys* Rafinesque, 1832, and *Rhinoclemmys* Fitzinger, 1835, are conspecific there is no likelihood of them being required to denote separate taxa and nothing would be gained by requesting that *Rhinoclemmys* be given precedence over *Chemelys*. We thus conclude that it is appropriate to request the International Commission on Zoological Nomenclature:

(1) to use its plenary powers to suppress the generic name

Chemelys Rafinesque, 1832, for the purposes of the Law of Priority but not for those of the Law of Homonymy;

(2) to place on the Official List of Generic Names in Zoology:
   (a) *Geoemyda* Gray, 1834 (gender: feminine), type species by original designation, *Testudo spengleri* Gmelin, 1789;
   (b) *Rhinoclemmys* Fitzinger, 1835 (gender: feminine), type species by subsequent designation by Lindholm, 1929, *Testudo dorsata* Schoepff, 1801, Name No. 752 on the Official Index of Rejected and Invalid Specific Names in Zoology, (= *Testudo punctularia* Daudin, 1801, Name No. 1906 on the Official List of Specific Names in Zoology);

(3) to place on the Official List of Specific Names in Zoology:
   (a) *spengleri* Gmelin, 1789, as published in the binomen *Testudo spengleri* (specific name of the type species of *Geoemyda* Gray, 1834);

(4) to place *Chemelys* Rafinesque, 1832, as suppressed by use of the plenary powers in (1) above on the Official Index of Rejected and Invalid Generic Names in Zoology.

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TESTUDO SCRIPTA SCHOEPFF, 1792: *EMYS CATASPILA* GÜNTHER, 1885: PROPOSED CONSERVATION (REPTILIA, TESTUDINES). Z.N.(S.)2315.

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In 1855 Gray described and named *Emys ventricosa* on the basis of a shell purchased from Warwick, a dealer, from an unknown locality (Gray, 1855, p. 28, pl. 14). Although Gray still recognized the species as valid in his latest pertinent works (Gray, 1873a, p. 148; 1873b, p. 14), he was the only one ever to do so. Even in his original description he indicated with a question-mark that *ventricosa* might be the same as *Emys mobilensis* of Holbrook, 1838 (the original proposal) or of himself in 1844 or of Duméril & Duméril, 1851. Agassiz (1857, p. 641) categorically assigned *ventricosa* to the synonymy of '*Ptychemys mobilensis*' (Holbrook), and Gray at first agreed to that synonymy (1858, pp. 286–287), but later (1863, p. 182) associated a question-mark (?) with it. Strauch, 1862, p. 32; 1865, p. 79, also concurred, placing *ventricosa* in the synonymy of '*Clemmys mobilensis*' (Holbrook). Gray reconsidered the matter in 1870 (p. 47), 1872 (p. 14) and 1873 (loc. cit.), each time recognizing '*Pseudemys ventricosa*' as valid. The name has not subsequently appeared in the literature as either a synonym or a valid name, and its proper allocation has remained undetermined.

2. A list of Mexican turtles in the British Museum (Natural History) was recently requested by the second and third authors for use in preparation of a review of the turtles of Mexico. Dr. Alice G.C. Grandison graciously complied. The list included the holotype of *Emys ventricosa* (1947.3.5.18, formerly 848.7.28.24), with the datum 'Mexico' – the first indication known to us of a geographic source for the specimen. In response to a request for further information, Mr. A.F. Stimson kindly gathered all pertinent information available and reported as follows: 'The specimen formed part of a collection purchased from Mr. Warwick in 1848. The locality given for the entire collection was simply "Mexico". Other species in this collection that I have been able to trace are *Ctenosaura acanthura* (Shaw, 1802), *Micrurus fulvius maculatus* Roze, 1967, *M.f. microgalbineus* Brown & Smith, 1942, *Kinosternon cruentatum* (Duméril & Bibron, 1851), *Kinixys belliana* Gray, 1821, and some or all of

the syntypes of *Emys venusta* Gray, 1855, *Emys cataspila* Günther, 1885 and *Cistudo* (*Onychotria*) *mexicana* Gray, 1849. The presence of *Kinixys* in a reputedly Mexican collection indicates that Warwick's data are not entirely reliable and that may have been the reason for Gray's non-acceptance of Mexico as the type-locality of *ventricosa*.'

3. We concluded that, in spite of the mentioned inconsistency, part of the collection was clearly of Mexican origin. With one exception, all the taxa represented occur on the Atlantic slopes of Mexico, and some occur nowhere else.

4. The proper allocation of the name *ventricosa* thus entered the essential purview relative to the proposed survey of the turtles of Mexico, although pertinence to the genus *Pseudemys*, as we interpret it, distinct from *Chrysemys* (*cf.* Smith & Smith, 1979, pp. 419–420), has long been recognized. Drs. Grandison and Stimson kindly loaned the holotype of *ventricosa* for examination by Legler. The specimen conforms in high degree with the geographic variants of *Pseudemys scripta* occurring in southern Tamaulipas and extreme northern Veracruz. Four of the taxa described from the Warwick collection have already had their type localities restricted to Tampico, Tamaulipas, which was an active port in the early 1800's, lies within the range of geographic variation in *P. scripta* that conforms with the type of *ventricosa*, and thus to a high degree of probability was the source of a considerable part if not all of Warwick's collection from Mexico. All the American taxa listed by Stimson occur in that vicinity. We accordingly here restrict the type locality of *Emys ventricosa* to Tampico, Tamaulipas.

5. The holotype (a dried shell) was examined, measured and photographed by Legler in December 1978; the following is abstracted from notes made at that time. Shell broken (probably since original description) along sutures in several places on posterior part of carapace and along the hypoplastral-xiphiplastral suture. Parts of scutes missing from anterior plastron and posterior carapace (loose scutes are associated with the specimen). Shell was cleaned superficially and taped together for examination and measurement.

6. There is extensive wear and abrasion on the abdominal and posterior halves of the pectoral scutes. In this region several layers of dead dermal bone overlie areas of epidermal scute replacement. This condition strongly suggests that the specimen was a captive. The condition of the shell (weak sutures in places, internal discoloration, lack of periosteum and scraps of dark tissue) make it virtually certain that the specimen died and decomposed at least partially before its preservation as a scientific specimen. An old,

healed spear or bullet wound on upper one-third of left 2nd lateral scute. Data tags attached to hole drilled in left hyoplastron. Both BM numbers inscribed on plastron in black ink.

7. Longitudinal rugosities on carapacal scutes pronounced. Ground color yellowish horn or straw; dark markings medium to very dark brown. This is a melanistic adult. Markings quite indistinct. Ocelli fairly distinct on marginals 1–8, their centers near lower posterior corner of each marginal. Only vague indications of other carapacal marks. No discernible plastral pattern except for brownish interlaminal seams.

8. Dimensions (in mm): carapace length 360; carapace width 255; shell height 156; plastral scute lengths (interlaminal) from anterior to posterior 49, 29, 40, 85, 41, 51.

9. There is no question that Gray's figure depicts this specimen although it shows neither the breakage nor the pathologic damage described. From this it is concluded that the breakage occurred subsequent to original illustration and that the artist chose not to show the abraded shell. These factors combine to show more pattern in the Gray illustration than is actually evident on the specimen at present.

10. Notes, photos and data on approximately 2,000 specimens of the *Pseudemys scripta* group were consulted *ad libitum* for comparative purposes. On the basis of shell proportions, relative sizes of plastral scutes, pattern and texture of shell, adult size, and pattern of adult melanism, it is clear that the holotype of *Emys ventricosa* corresponds most closely to populations of *Pseudemys scripta* on the eastern coastal lowlands of Mexico somewhere between the latitudes of 20° and 25° north (extreme northern Veracruz and southern Tamaulipas).

11. With our present definitive identification of *ventricosa,* a problem of nomenclatural stability is introduced, since that name is an obvious *nomen oblitum*, unused for over 100 years. The subspecies to which it belongs is *Pseudemys scripta cataspila* (Günther, 1885, p. 4, pl. 6, fig. B), which name has been recognized as valid, at either specific or subspecific level, erratically ever since its original description, as indicated by the following chresonymy:

Emys (*Clemmys*) *cataspila* Günther, 1885, p. 4, pl. 6, fig. B.
Pseudemys cataspila, Cope, 1887, p. 22; Hartweg, 1939, p. 55.
Chrysemys ornata cataspila, Boulenger, 1889, p. 82.
Emys cataspila, Duges, 1896, p. 479 (part).
Pseudemys scripta cataspila, Carr, 1938, p. 135 (part); Hartweg, 1939b, p. 4; Smith & Taylor, 1950a, p. 346; ibid., 1950b, p. 32 (part); Carr, 1952, p. 262; Werler & Smith, 1952, p. 553; Casas Andreu, 1965, pp. 393, 396; Moll &

Legler, 1971, p. 4.

Pseudemys ornata cataspila, Mertens & Wermuth, 1955, p. 364; Parsons, 1960, p. 118; Pritchard, 1967, p. 84; Greene, 1972, p. 2.

Chrysemys scripta cataspila, Smith & Smith, 1975, p. 5; ibid., 1976, p. T-C-5; Slavens, 1976, p. 22.

12. Not all recent authors have accepted *cataspila* as a valid taxon; Wermuth & Mertens, for example, in both 1961 (pp. 147–148) and 1977 (p. 56) regarded it as inseparable from *Pseudemys o. ornata* (Gray, 1831). However, all authors who have accepted as valid the particular subspecies to which the name *cataspila* applies, beginning with Carr in 1938, have used that name for it. The name has also been interpreted by several other workers prior to 1900 as applicable to a distinct, valid species – the same entity now understood as a subspecies of *scripta*.

13. *Emys ventricosa* Gray (1855) has not been accepted as a valid name by anyone since 1873, never by anyone but the original author, and never with any clear statement of its geographic origin. *Emys cataspila* Günther (1885) has been used as a valid name in at least 20 works by 20 different authors for populations of *Pseudemys* in northeastern Mexican coastal drainages. Since we now know (here reported for the first time) that the earlier name *Emys ventricosa* also applies to these populations, we here request the Commission to suppress the name *Emys ventricosa* Gray, in conformance with the terms of Article 79.

14. Concomitantly we ask for addition of *Emys cataspila* Günther (1885) to the Official List of Specific Names in Zoology, thereby nomenclaturally validating it for the taxon represented by its holotype, although since complete agreement upon the taxonomic validity of that taxon does not yet exist, it should be understood by all workers that protection from senior synonyms or homonyms is not conferred by inclusion on an Official List.

15. The earliest name for the species to which *Emys cataspila* Günther is assigned by most workers, including ourselves, is *Testudo scripta* Schoepff (1792, p. 16, pl. 3, figs. 4, 5), now *Pseudemys scripta*. The broad concept of that species, to which we subscribe, is rejected by some workers (*e.g.* Mertens & Wermuth, 1955, p. 364; Wermuth & Mertens, 1977, p. 56), who recognize two or more species in the same complex (Wermuth & Mertens recognize four!), and regard *cataspila* as a synonym of *Pseudemys o. ornata* (Gray) or as a valid subspecies of that species; however, even that name (*Emys ornata* Gray, 1831, p. 30) is junior to *Testudo scripta* Schoepff, 1792. In addition, some workers have not regarded *cataspila* as a subspecies distinct from what we recognize as *Pseudemys scripta venusta* (Gray, 1855, pp. 24–25, pl.

122) (originally described as *Emys venusta*), occurring on the Atlantic coastal plain immediately south of the range of *P.s. cataspila*. Were that conclusion ultimately to be adopted, regarding the composite as subspecifically distinct from the Pacific coastal populations on which the name *ornata* is based, the name *venusta* would take priority over *cataspila*. Thus the nomenclature of this group remains currently in question, and should be free to conform with future taxonomic conclusions without nomenclatural restraints. The one certainty is that the name *Testudo scripta* is secure for at least a part of the complex, if not the whole of it. Hence we ask for addition of that name also to the Official List of Specific Names in Zoology. The dates of that name and of *cataspila* determine which is the specific name, if they are considered conspecific, whether either or both is on the Official List or not.

16. In recapitulation we therefore ask the Commission:
    (1) to use its plenary powers to suppress the species-group name *ventricosa* Gray, 1855, as published in the binomen *Emys ventricosa*, for the purposes of the Law of Priority but not for those of the Law of Homonymy;
    (2) to place the species-group name *scripta* Schoepff, 1792, as published in the binomen *Testudo scripta*, on the Official List of Specific Names in Zoology;
    (3) to place the species-group name *cataspila* Günther, 1885, as published in the binomen *Emys cataspila*, on the Official List of Specific Names in Zoology; and
    (4) to place the species-group name *ventricosa* Gray, 1855, as suppressed under the plenary powers in (1) above, on the Official Index of Rejected and Invalid Species-group Names in Zoology.

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CHROMIS CUVIER *IN* DESMAREST, 1814 (OSTEICHTHYES, PERCIFORMES, POMACENTRIDAE): PROPOSAL TO PLACE ON OFFICIAL LIST OF GENERIC NAMES IN ZOOLOGY, AND THAT GENERIC NAMES ENDING IN *-CHROMIS* BE RULED TO BE MASCULINE. Z.N.(S.)2329

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The history of the generic name *Chromis* has been reviewed by Emery, 1975, who concluded that:

(1) *Chromis* dates from Cuvier *in* Desmarest, 1814, p. 88 (erroneously spelled Desmarets throughout);
(2) The type species of *Chromis* is *Sparus chromis* Linnaeus, 1758, p. 280 by original designation;
(3) *Chromis* is a name of variable gender, although the majority of authors have regarded it as masculine;
(4) Cuvier, 1815, by inclusion of the species *castanea* and *nilotica*, considered *Chromis* to be feminine;
(5) This gender applies only to *Chromis*; the gender of all other generic names ending in *-chromis* should be determined individually.

2. We agree with the correctness of Emery's review of the problem except for a minor notation that the Committee on Names of Fishes of the American Fisheries Society treated *Chromis* as feminine in its 1960 edition and as masculine in its 1970 edition (Bailey *et al.*, 1960, 1970). Actually the committee was inconsistent in 1960, using *cyanea* and *multilineata* (feminine) but *insolatus* (masculine) for included species with adjectival endings, the last a past participle correctly treated as adjectival.

3. Emery, 1975, p. 81, commented that although we and others agreed with the technical correctness of his position, we did not agree with his suggested course of action.

4. The problem stems not only from the current confusion on the gender of *Chromis* but from the wide use in ichthyology of generic names ending in *-chromis*, the seeming logic that all should have the same gender, and the fact that these genera have been overwhelmingly treated as masculine. Recently, Kullander, 1977, described *Papiliochromis* and designated its gender as feminine. This name is a junior synonym of *Microgeophagus* Axelrod according to Robins & Bailey (in press). Thus, without a specific uniform ruling by the Commission on all names ending in *-chromis*, we may antici-

pate varied use in the future and needless difficulty for authors and editors alike. Cichlids are important aquarium fishes and are increasingly used as behavioural and experimental fishes. Moreover, there are many undescribed species and the adjectival ending accorded each new species in a genus ending in *-chromis* will vary with each author's view. Pomacentrids are popular with marine aquarists and they also are widely studied and reported on by ethologists. A non-exhaustive search of ichthyological literature reveals numerous generic names ending in *-chromis* (Table 1).

5. In disagreement with Emery, we believe that for purposes of zoological nomenclature *Chromis* should be treated as masculine:

(1) classical dictionaries vary in citing the gender of *chromis* (chromios), a sea fish, as masculine or feminine. In discussing this point with Dr. H.D. Cameron, Chairman of the Department of Classical Studies, University of Michigan, he assures us that there is no sure way to demonstrate the correct gender of Greek *Chromis* in antiquity, suggesting that this is a practical matter in modern zoology to be resolved in the most reasonable way. This we visualize as concordance with the rules and/or prevailing use.

(2) *Chromis* is commonly (e.g. Jordan, 1917, p. 93) cited as dating from Cuvier, 1815, wherein *Sparus chromis* Linnaeus was listed as type. Emery (*op. cit.*) commented that Cuvier included also *castanea* and *nilotica*, thus indicating his selection of feminine gender.

(3) Nevertheless, as mentioned above and as was stated by Emery, 1975, the genus *Chromis* was originally proposed by Cuvier in Desmarest, 1814. We repeat the quotation given by Emery from the work of Desmarest: '..... le *Petit Castagneau*, appelé *Sparus chromis* par tous les auteurs, qui doit devenir le type d'un nouveau genre nommé *Chromis* ....' Emery believed that this use 'was in non-binomial nomenclature'. We cannot agree with this interpretation. Although only one species was mentioned in Desmarest's title, the body of the text includes as species of *Chromis, Chromis castanea, Labrus niloticus* (also mentioned as *Chromis nilotica*), and *Labrus punctatus*.

(4) In the original proposal (1814) no statement of gender for *Chromis* was given, although the use of *C. castanea* and *C. nilotica* would indicate feminine gender, as argued by Emery. Subsequently Cuvier was inconsistent, perhaps unconcerned about the ending.

(5) The prevalent treatment of *Chromis* in ichthyological literature has been as masculine, as concluded also by Emery. A sampling of general works, many of which serve as guides to nomenclatural use, includes the following:

masculine	*masculine or feminine*	*feminine*
Beaufort, L.F. de, 1940	Allen, G.R., 1975	Mago-Leccia, F., 1970
Bini, G., 1968	Böhlke, J.E. & Chaplin, C.C.G., 1968	
Blanche, J., Cadenat, J. & Stauch, A., 1970.	Randall, J.E., 1968	
Fowler, H.W., 1928		
——— & Bean, B.A., 1928		
Grant, E.M., 1978		
Herre, A.W., 1953		
Jordan, D.S. & Evermann, B.W., 1898		
Marshall, T.C., 1964		
Meek, S.E. & Hildebrand, S.F., 1925		
Metzelaar, J., 1919		
Monod, Th., 1973		
Munro, I.S.R., 1955, 1967		
Parr, A.E., 1930		
Shiino, S.M., 1976		
Smith, J.L.B., 1965		
——— & Smith, M.M. 1969		
Woods, L.P. & Schultz, L.P. 1960		

Among works sampled, only those by Allen, Böhlke & Chaplin, Mago-Leccia, and Randall used *Chromis* in the feminine, whether or not consistently. Likely all except Allen followed Bailey *et al.*, 1960, a usage reversed by Bailey *et al.*, 1970. Allen anticipated Emery in treating *Chromis* as feminine, but inadvertently retained masculine endings for *C. margaritifer* and *C. verater*.

(6) Emery contends (*op. cit.*) that a change from customary gender for *Chromis* to feminine is wholly independent of the gender of other names ending in *-chromis*. Such

inconsistency, however, would open the way to general confusion. Table 1 lists more than 70 such names, about 50 of which denote currently accepted genera. A few others are preoccupied or invalid emendations. Some are known to us to be currently regarded as generic synonyms, still others are probably unacceptable, but many of these are available nomenclaturally. There are 57 such genera in the family CICHLIDAE and it is likely that more will be proposed. Many are monotypic or oligotypic and few names are adjectives. Authors rarely have indicated gender. Many additional species remain to be described in these genera. To our knowledge among all of these only *Papiliochromis* was stated to be or treated as feminine when proposed and this probably resulted from the author's familiarity with Emery's paper. (The single known species is a patronym in the genitive; this genus is considered to be a junior synonym of *Microgeophagus* by Robins & Bailey, in press.) As species with adjectival names are added, gender will be determined haphazardly. And if species are shifted between genera with the same ending but different gender, the results will be chaotic. With few exceptions *-chromis* names are treated as masculine. Should *Chromis* be different? To us common sense dictates uniformity in treatment of such combining words or suffixes. Thus, we applaud the recent use of its plenary powers by the Commission to designate all names ending in *-ops* as masculine (1974, *Bull. zool. Nom.*, vol. 31(1), pp. 81-83).

6. The Commission is therefore asked:
   (1) to use its plenary powers to rule (a) that the gender of *Chromis* Cuvier, *in* Desmarest, 1814, is masculine; (b) that the gender of all generic names ending in *-chromis* is masculine;
   (2) to place the generic name *Chromis* Cuvier, *in* Desmarest, 1814 (gender, by the ruling given under the plenary powers in (1) above, masculine) type-species, by original designation, *Sparus chromis* Linnaeus, 1758, on the Official List of Generic Names in Zoology;
   (3) to place the specific name *chromis* Linnaeus, 1758, as published in the binomen *Sparus chromis* Linnaeus (specific name of type-species of *Chromis* Cuvier, 1814) on the Official List of Specific Names in Zoology.

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TABLE 1

The genus *Chromis* and some other fish genera ending in *-chromis*. The approximate number of species of each in parentheses.[1]

POMACENTRIDAE

Acanthochromis Gill, 1863 (1)
Actinochromis Bleeker, 1877 (1)
Belochromis Fowler, 1944 (1)
Centrochromis Norman, 1922 (= *Glyphisodon*)
Chromis Cuvier, 1814 (*in* Desmarest, 1814) (50±)
Dorychromis Fowler and Bean, 1928 (= *Chromis*)
Hoplochromis Fowler, 1918 (= *Chromis*)
Lepicephalochromis Fowler, 1943 (= *Chromis*)
Lepidochromis Fowler & Bean, 1928 (= *Chromis*)
Pellochromis Fowler & Bean, 1928 (= *Dascyllus*)
Pomachromis Allen & Randall, 1974 (4)
Pycnochromis Fowler, 1941 (= *Chromis*)
Serrichromis Fowler, 1943 (1)
Siphonochromis Fowler, 1946 (= *Chromis*)
Thrissochromis Fowler, 1941 (1)

PSEUDOCHROMIDAE (including Anisochromidae; see Springer, Smith, and Fraser, 1977)

Anisochromis J.L.B. Smith, 1954 (2)
Leptochromis Bleeker, 1875 (= *Pseudochromis*)
Loxopseudochromis Fowler, 1934 (1)
Nematochromis Weber, 1913 (1)
Opsipseudochromis Fowler, 1934 (1)
Pseudochromis Rüppell, 1835 many

POMATOMIDAE

Chromis Gronow, 1854 (= preoccupied)

CICHLIDAE

Aristochromis Trewavas, 1935 (1)
Astatochromis Pellegrin, 1905 (2)
Astatoreochromis Pellegrin, 1904 (3)
Boulengerochromis Pellegrin, 1904 (1)
Callochromis Regan, 1920 (2)
Chalinochromis Poll, 1974 (1)
Champsochromis Boulenger, 1916 (= *Cyrtocara* Boulenger; see Greenwood, 1979)
Chilochromis Boulenger, 1902 (1)
Chromis Cuvier, 1817 (in part = *Tilapia*)
Chromis (Cuvier) Günther, 1872 (= *Tilapia*)

Ctenochromis Pfeffer, 1893 (5)
Cyathochromis Trewavas, 1935 (1)
Cyprichromis Scheuermann, 1977 (3)
Genyochromis Trewavas, 1935 (1)
Gephyrochromis Boulenger, 1901 (2)
Gobiochromis Poll, 1939 (1)
Haplochromis Hilgendorf, 1888 (5)[2]
Hemichromis Peters, 1857 (2)
Hemihaplochromis Wickler, 1963 (= *Pseudocrenilabrus*)
Heterochromis Regan, 1922 (1)
Julidochromis Boulenger, 1898 (5)
Labidochromis Trewavas, 1935 (3)
Labrochromis Regan, 1920 (= *Haplochromis*, s.l.)
Labrochromis Daget, 1952 (preoccupied)
Leptochromis Regan, 1920 (preoccupied)
Lichnochromis Trewavas, 1935 (1)
Limnochromis Regan, 1920 (7)
Lipochromis Regan, 1920 (= *Haplochromis*, s.l.)
Melanochromis Trewavas, 1935 (5)
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Nannochromis (improper emendation for *Nanochromis*) auctorum
Nanochromis Pellegrin, 1904 (2)
Neochromis Regan, 1920 (= *Haplochromis*, s.l.)
Ophthalmochromis Poll & Matthes, 1962 (1)
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Orthochromis Greenwood, 1954 (4)
Papiliochromis Kullander, 1977 (= *Microgeophagus* Axelrod)
Parachromis Agassiz, 1856 (= *Cichlasoma*)
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Paralabiodochromis Greenwood, 1956 (1)
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Pelvicachromis Thys van den Audenaerde, 1968 (= subgenus of *Pelmatochromis*)
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Rhamphochromis Regan, 1921 (8)
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Sargochromis Regan, 1920 (= subgenus of *Serranochromis*)
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Triglachromis Poll & Thys van den Audenaerde, 1974 (1)
Tylochromis Regan, 1920 (8)
Xenochromis Boulenger, 1898 (= *Perissodus*)

[1] We have indicated synonymies where dictated by recent studies but we

cannot attest to the correctness of these allocations. The classification of cichlid fishes in particular is unstable and authors vary in according generic or subgeneric ranking to various of these taxa.

[2] In recent years approximately 300 species (the majority living in Malawi [Nyasa], Victoria, and adjacent lakes) have been placed in the genus *Haplochromis* (sensu lato). Greenwood (1979) has restricted the genus to only five species from Lakes Victoria, Edward, George, Nabugabo, and Kivu. Many species have been transferred to other genera, especially the large assemblage of Malawi species assigned tentatively to *Cyrtocara*, but until reclassification is complete many species are retained temporarily in *Haplochromis* (s.l). Some genera listed as synonyms in this table will be resurrected.

TICHOGONIA ROSSMAESSLER, 1835 (MOLLUSCA, BIVALVIA): CLOSURE OF CASE. Z.N.(S) 1702

By the Secretary, International Commission on Zoological Nomenclature

In August 1965 (*Bull. zool. Nom.* vol. 22, p. 206) Mr Joshua L. Baily, Jr. applied for the suppression of the generic name *Tichogonia* Rossmaessler, 1835, an objective synonym of *Dreissena* van Beneden, 1835. (The name was misspelt '*Trichogonia*' in the application; this was corrected on p. 376 of the same volume.) *Dreissena* had been placed on the Official List of Generic Names in Zoology by the ruling in Opinion 351 (not Opinion 782, as stated by Mr Baily).

Mr David Heppell has pointed out to me that *Dreissena* van Beneden was published in January 1835 (*fide* Kennard & Woodward, 1926, *Synonymy of the British non-Marine Mollusca*, p. 295), whereas the Vorwort of Rossmaessler's work is dated April 1835. *Tichogonia* is therefore clearly junior to *Dreissena*, and there is no need for the Commission to take any action on it. (The ruling in Opinion 351 gave *Dreissena* the status of a justified emendation of *Driessena* van Beneden, 1835; it consequently takes the same date and authorship.)

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CORRIGENDA

Vol. 33:

in list of Contents of Pts 3/4, line 11:	for Coleoptera read Hymenoptera.
page 155, line 4:	for COLEOPTERA read HYMENOPTERA.
page VIII, line 24:	for Coleoptera read Hymenoptera.

Vol. 35:

page 2, application (12):	for F. Grime read F. Grine.

Vol. 36:

page 125, line 35:	for ACHIDAE read ACHIIDAE.
page 125, line 39:	for ACHIDAE read ACHIIDAE.
page 126, line 5:	for ACHIDAE read ACHIIDAE.
page 127, line 34:	for ACHIDAE read ACHIIDAE.
page 128, line 9:	for ACHIDAE read ACHIIDAE.
page 128, line 38:	for ACHIDAE read ACHIIDAE.
page 128, line 45:	for ACHIDAE read ACHIIDAE.

Vol. 37:

page 11:	after title in Opinion 1147, and before (1) of the Ruling insert: 'In the case of species of CHIRONOMIDAE established by Professor J.J.Kieffer from adults provided by Professor A. Thienemann ....."
page 163, line 1:	for INOQUE read INOUE.
page 177, line 5:	for Geoffrey read Geoffroy.

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